

For Reference

NOT TO BE TAKEN FROM THIS ROOM

EX LIBRIS
UNIVERSITATIS
ALBERTAENSIS



For Reference

NOT TO BE TAKEN FROM THIS ROOM

THE UNIVERSITY OF ALBERTA

JOHN DEWEY'S PHILOSOPHY AND EDUCATION

By



HENRY CHUNG-MING LU

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

EDMONTON, ALBERTA

JUNE, 1968

Thesis
1968 (F)
50 D.

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read,
and recommend to the Faculty of Graduate Studies for
acceptance a thesis entitled "John Dewey's Philosophy
and Education" submitted by Henry Chung-ming Lu in
partial fulfilment of the requirements for the degree
of Doctor of Philosophy.

ABSTRACT

This dissertation deals with certain essential aspects of John Dewey's important philosophical doctrines and educational recommendations. It attempts to indicate what may be considered the primary objective of Dewey's philosophy, and the means or methods suggested by Dewey to achieve that objective. The study also attempts to show how Dewey's conception of the office and function of philosophy has influenced his thinking on education. An attempt is also made to assess the significance of Dewey's philosophical doctrines and to point out some of the shortcomings of his general position.

Dewey believes that the purpose of philosophy is to re-integrate or unify man's beliefs about matters-of-fact and his beliefs about values. He suggests that this objective can be achieved only through the development of a logic or method of inquiry which can establish continuity between these two kinds of beliefs. Dewey also believes that the method of science and the social ideal of democracy can, in different though related ways, make significant contributions toward the development of competent inquiry, and the realization of its goals. Therefore, inquiry, science, and democracy are, each in its own way, very significant concepts in Dewey's philosophy. That scientific inquiry bears upon the determination of values is exemplified in Dewey's theory of valuation where he maintains that evaluative propositions rest upon scientific propositions of a descriptive nature.

An attempt has also been made to clarify the distinction between philosophy of education and educational theory, and to show that Dewey's definition of education, his concept of teaching and learning, and other important features of his educational theory rely heavily upon his general philosophical doctrines.

ACKNOWLEDGEMENTS

I am grateful to my supervisor Dr. N. C. Bhattacharyya who has guided me through my Ph.D. program. I wish to express my deep obligation to him for his instruction, advice, and interest both in regard to my work and my welfare.

I am also indebted to Dr. D. C. Hicks and Dr. B. E. Walker for their advice and encouragement. I wish also to acknowledge the valuable criticisms and suggestions made by Dr. R. S. Patterson and Dr. L. G. Thomas.

I thank my wife Janet Yufuko Lu who did the typing of the draft and the final versions of the thesis.

H. C. L.

TABLE OF CONTENTS

	Page
Introduction	1
Chapter I. THE FUNCTION OF PHILOSOPHY	9
Chapter II. THE GOAL OF INQUIRY	27
Chapter III. DEWEY'S THEORY OF EVALUATION (I)	44
Chapter IV. DEWEY'S THEORY OF EVALUATION (II)	64
Chapter V. DEWEY'S THEORY OF SCIENCE (I)	84
Chapter VI. DEWEY'S THEORY OF SCIENCE (II)	101
Chapter VII. DEWEY'S CONCEPTION OF DEMOCRACY	115
Chapter VIII. PHILOSOPHY OF EDUCATION AND EDUCATIONAL THEORY	129
Chapter IX. DEWEY'S DEFINITION OF EDUCATION	147
Chapter X. DEWEY'S CONCEPT OF TEACHING AND LEARNING	166
Chapter XI. DEWEY'S EDUCATIONAL THEORY	184
Chapter XII. CONCLUDING REMARKS	197
Bibliography	205

INTRODUCTION

This dissertation is on John Dewey's philosophy of education. The scope of the essay may be described in a general way as the exploration and examination of some fundamental concepts and arguments in Dewey's technical philosophy, and his social and educational theory. As Dewey understands it, his social and educational concepts are based on his philosophical doctrines; it is therefore necessary to consider his more philosophical arguments in order to understand his recommendations about social life and educational practice.

John Dewey is, however, a difficult philosopher. He is not easy to follow; his sentences are complex, often overloaded with qualifications. Moreover, he has written over a long period of years about forty books and eight hundred and thirty papers on almost every aspect of philosophy and many branches of social science. It is often difficult to disentangle the important features of his philosophical positions from the various contexts, or to recognize even the significant modifications of previously held views. There has also grown over the last fifty years a vast literature on Dewey. In our attempt to present the salient aspects of his philosophical position and his social and educational theory we have found it necessary to concentrate primarily on some of his basic concepts and doctrines. It is recognized that a much closer study of Dewey's many specific doctrines is necessary to understand him thoroughly; a study of all these cannot be undertaken in a single

study.

The present inquiry is designed to serve three purposes: first, to point out what may be considered the essential objective of Dewey's philosophy and the means devised by him to achieve that objective; second, to describe in what way and to what extent the objective of Dewey's philosophy and the means devised by him to achieve that objective have influenced his philosophy of education and educational theory; third, to assess the significance of Dewey's philosophy and to point out some of the shortcomings of his position. As will be evident to the reader, one primary objective of Dewey's philosophy is that of reintegrating man's beliefs about matters-of-fact and his beliefs about values. If this objective is to be achieved, man must be capable of performing the efficient conduct of inquiry to which science and democracy can make significant contributions. It will also be seen that Dewey's philosophy of education and his educational theory have been influenced by this philosophical concern. This short introduction is intended to present a general picture of how the chapters that follow are arranged in order to achieve the purposes of the present inquiry.

Dewey holds that philosophy must deal with the problems of men, and that the deepest and most serious problem of modern life is the conflict between man's beliefs about values and his beliefs about matters-of-fact. The task of contemporary philo-

sophy is, therefore, conceived as that of restoring integration and cooperation between these two kinds of beliefs. The function of philosophy is, in Dewey's view, to specify the direction in which man's beliefs about values can be made secure upon objective empirical evidence so that they can achieve harmony with his beliefs about matters-of-fact. This is discussed in Chapter I.

According to Dewey, our beliefs should be based upon empirical evidence, no matter whether they are beliefs about matters-of-fact or beliefs about values. The evidence of our beliefs may be stated in the if-then form and must be empirically verifiable. Dewey holds that, in general, the empirical evidence that supports our beliefs may be stated in three different if-then forms: If A, then B, which is a cause-effect connection; if A is to be achieved, then B must be employed, which is a means-end connection. The goal of inquiry is to discover, where possible, all these three kinds of connections in support of our beliefs. This is taken up in Chapter II.

However, the question that arises is: What does Dewey mean when he suggests that our beliefs about values must be based upon empirical evidence ? To answer this question, Dewey constructs his theory of evaluation where he argues that to judge the value of an object is to judge the conditions and consequences

in the context of a given problematic situation. According to Dewey, wherever there are desires, there are ends, and since a particular desire occurs only in a particular situation, it follows that an end occurs only in the context of a particular situation. To judge the value of an object is to judge whether the object is a means of reaching the end imposed by the conditions of the situation.

While judging the value of an object, we must also consider what consequences will follow after the end is reached. Therefore, our belief about the value of an object must be based upon the evidence that the object is a means of reaching an end imposed by the conditions of the situation and that when the end is reached, certain "desirable" consequences will follow. This means that the evidence that supports our beliefs about values is of two kinds, namely, means-ends connections and means-consequences connections. These matters together with the problems of moral judgment are considered in Chapters III and IV.

Dewey proceeds to assert that if man's beliefs are to be based upon empirical evidence, no matter whether they are beliefs about matters-of-fact or about values, then science is indispensable to the establishment of these beliefs. The reason is that the empirical evidence that supports our beliefs is the known connections between things as cause or means and other things as effect, consequences, or ends; and modern science has

proved to be the most effective means of discovering such connections. Hence science is a means of reaching beliefs and testing those that are entertained in all areas of human life. However, Dewey points out that science may be understood as attitude and method, and it may also be understood as a body of knowledge. Scientific attitude, scientific method and scientific knowledge together constitute the genuine meaning of science. These three elements of science all contribute, each in its own way, to the conduct of competent inquiry. Also in Dewey's view, the method of inquiry employed in natural science is most effective in arriving at truth, because the natural scientist has the advantage of working under much more narrowly and exactly controlled conditions, with the aid of publicly verifiable procedures to ensure objectivity of his conclusions. For this reason we should take as far as possible the pattern of inquiry in natural science as the model for other fields of inquiry. Dewey also points out that the objects of natural science are continuous with those of common sense and that there is no special difficulty in extending scientific inquiry into all areas of human experience. Some of these questions are taken up in Chapters V and VI.

In the following chapter, we consider briefly Dewey's conception of democracy as, in his view, science and democracy are closely linked with one another. Dewey thinks that democracy is

indispensable to the development of science, because modern science has developed through the protection of the individual's freedom of inquiry which is the heart of democracy. Dewey's conception of democracy is also linked with the ideas of liberty, equality, and fraternity. In Dewey's view, if a truly democratic community is to come into existence, man needs to employ scientific method in social inquiry, so that a store of scientific knowledge about social phenomena can be built. However, Dewey points out that before the possibility of employing scientific method in social inquiry and of building a store of scientific knowledge about social phenomena are realized, the conditions exemplified in his conception of democracy must be fulfilled.

It has been stated earlier that one of the purposes of the present inquiry is to determine in what ways and to what extent are Dewey's philosophy of education and educational theory influenced by the primary objective of his philosophy and the means devised by him to achieve that objective. For the sake of clarification, a distinction between philosophy of education and educational theory is proposed in Chapter VIII. Philosophy of education will be construed as both method and a body of subject-matter. As method, philosophy of education is the extension of philosophical analysis to educational contexts, and as a body of subject-matter it is assumed to contain a set of prescriptive and evaluative

propositions defined and systematized from the standpoint of and for the sake of philosophic discourse in education. On the other hand, educational theory will be construed as a set of specific recommendations with regard to what should be done in educational practice.

In the following chapter we consider Dewey's definition of education and its various implications. We attempt to show that Dewey's primary philosophical concern is also reflected in his conception of education. We also attempt to point out what appears to us as the shortcoming of his position. Since, according to Dewey, learning is identical with knowing and the method of knowing is also the method of learning, we consider it worthwhile to say a detailed word on Dewey's concept of teaching and learning. An analysis of the various objectives of learning is made to point out what Dewey really intended to achieve by his method of problem-solving. We discuss this in Chapter X. The next chapter entitled "Dewey's Educational Theory" is an attempt to formulate in a general way Dewey's recommendations about the aims and general character of education. Here we are more concerned with schooling and the role of the school as an educational institution in a democratic society.

In the last chapter, by way of concluding remarks, we try to recapitulate briefly Dewey's conception of philosophy as a plan for action, and his concern with the practical matters of life

which led him to formulate a philosophical system of the synthetic kind. While pointing out some of the shortcomings of his position we also try to recognize his very important contributions in the field of educational thought.

CHAPTER I

THE FUNCTION OF PHILOSOPHY

1. Dewey's Conception of Philosophy. — Dewey holds that philosophy deals with the problems of men which originate in the conflicts of social life. In Dewey's view, where men's beliefs come into conflict with one another, philosophy can perform a double task: that of criticizing those beliefs which have become out-of-date and must be modified; and that of discovering a small number of broad or general principles by which man's diverse beliefs may be integrated. The first task of philosophy is termed "criticism", while the second task may be called "discovery".

Dewey says,

If one is willing to adopt even as a hypothesis for the time being, the idea that the immediate subject matter for philosophy is supplied by the body of beliefs, religious, political, scientific, that determines the culture of a people and age, there follow certain conclusions regarding the problem and method of philosophy... Philosophy is criticism; criticism of the influential beliefs that underlie culture;¹

The task of philosophy as criticism, according to Dewey, is to point out the reasons why our diverse beliefs are in conflict with one another. There is, however, another task of philosophy, namely,

1. Bernstein, Richard J. (ed.) John Dewey On Experience, Nature and Freedom (New York: The Liberal Arts Press, 1960), pp. 106-7

to discover a small number of general or comprehensive principles by which man will be able to readjust his conflicting beliefs, so that a more consistent and harmonious pattern of life may be established. Dewey says,

With respect to subject matter, philosophy is an attempt to comprehend — that is, to gather together the varied details of the world and of life into a single inclusive whole, which shall either be a unity, or, as in the dualistic systems, shall reduce the plural details to a small number of ultimate principles. On the side of the attitude of the philosopher and of those who accept his conclusions, there is the endeavor to attain as unified, consistent, an outlook upon experience as is possible. This aspect is expressed in the word 'philosophy' — love of wisdom.²

Thus, it can be said that the demand for a philosophy arises whenever there is the need for an integration of the conflicting beliefs in life. The negative task of philosophy is the criticism of those beliefs which have become out-of-date, while its positive task is to discover a small number of "ultimate principles" by which conflicting beliefs may be reconciled, and consistency or integration of social life recovered. Once these "ultimate principles" are discovered and they come to form a system of philosophy, the system becomes subject to public verification by which its claim of resolving the conflicting beliefs may be determined.

2. Dewey, John Democracy and Education (New York: The Macmillan Company, 1916), p. 378. (*Italics mine*)

Dewey holds that one of the most urgent problems of contemporary life is the prevailing conflict between our beliefs about matters-of-fact and our beliefs about values. This conflict has resulted from the entrance of modern science into our culture. Since the development of modern science, man has formed the conviction that his beliefs about matters-of-fact must be impersonal, objective, and capable of public verification. On the other hand, however, man's beliefs about values remain pre-scientific, for he still sticks to the notion that beliefs about values are bound to be subjective, and incapable of verification. Hence the conflict. Dewey says,

The problem of restoring integration and cooperation between man's beliefs about the world in which he lives and his beliefs about the values and purposes that should direct his conduct is the deepest problem of modern life. It is the problem of any philosophy that is not isolated from that life.³

Since in Dewey's view, the most significant problem of contemporary life is this conflict between man's beliefs about matters-of-fact and his beliefs about values, contemporary philosophy must perform the task of evaluating man's beliefs about values in the light of the development of modern science. Many new beliefs about matters-of-fact have come into existence as a result of the development of modern science, whereas man's beliefs about values were esta-

3. Dewey, John The Quest for Certainty (New York: G. P. Putnam's Sons, 1960), p. 255

blished prior to the rise of modern science. In Dewey's view, then,

Philosophy... is a generalized theory of criticism. Its ultimate value for life-experience is that it continuously provides instruments for the criticism of those values — whether of beliefs, institutions, actions or products — that are found in all aspects of experience.⁴

Also, philosophy must try to discover a small number of "ultimate principles" by which a more consistent and harmonious pattern of social life may come into existence. The most fundamental principle in Dewey's philosophy is that if man's beliefs about matters-of-fact and his beliefs about values are to be reconciled, they must all be based on competent inquiry. That is to say, all beliefs must be reached as a result of the operation of competent inquiry, so that they may be taken as warranted assertions. Dewey says,

If inquiry begins in doubt, it terminates in the institution of conditions which remove need for doubt. The latter state of affairs may be designated by the words beliefs and knowledge.⁵

However, Dewey tells us that the term "warranted assertion" is preferred to the terms belief and knowledge, because the former "involves reference to inquiry as that which warrants assertion".⁶ Dewey also advocates that judgment is "the conclusion of inquiry."⁷

4. Dewey, John Experience and Nature (New York: Dover Publications, INC., 1958), p. xvi

5. Dewey, John Logic: The Theory of Inquiry (New York: Henry Holt and Company, 1938), p. 7

6. Ibid., p. 9

7. Ibid., p. 246

Therefore, it can be seen that judgment, belief, knowledge, and warranted assertion are not infrequently used as four synonymous terms in Dewey's writing. There are two different kinds of terms, abstract and concrete. Warranted assertion is a concrete term and warranted assertibility is an abstract term. Dewey says, "When knowledge is taken as a general abstract term related to inquiry in the abstract, it means 'warranted assertibility'."⁸ Therefore, when belief, knowledge, and judgment are used as concrete terms, they are synonymous with warranted assertion, and when they are used as abstract terms, they indicate warranted assertibility.

In Dewey's view, if man's beliefs about matters-of-fact and his beliefs about values were both warranted assertions, there would be no conflict; and a consistent and harmonious pattern of life would come into existence. As philosophy deals with the problems of men which originate in the conflicts of social life, its method must be empirical. Philosophic thinking must set out from the material of ordinary experience, trying to determine the nature of the conflicts of social life, and striving to arrive at a small number of "ultimate principles" to be brought back to the things of ordinary experience for verification. Dewey observes that philosophy must set out "from the actual

8. Ibid., p. 9

subject-matter of primary experience"⁹ and that conclusions of philosophy "be brought back to the things of ordinary experience... for verification."¹⁰

2. Philosophy is Allied With Science. — We have incidentally touched upon Dewey's distinction between two kinds of terms, namely, abstract and concrete, when we observed that in Dewey's theory, "warranted assertion" is a concrete term and "warranted assertibility" is an abstract term. Concrete terms are also called existential or denotative terms, and abstract terms called conceptual, universal, or connotative terms. Dewey holds that any given term is either concrete or abstract. Speaking of this distinction, Dewey says, "All other distinctions are either aspects of this fundamental distinction in logical office or are derived from it."¹¹ As a matter of fact, what Dewey calls abstract terms seem to be prescriptive in character. Universal terms, as Dewey uses them, designate prescriptions of conditions to be satisfied in inquiry. For example, Dewey tells us that as a concrete term, "ship" denotes a ship which has existence in time and space, but shipness as an abstract term designates a definition of what it is to be a ship. The former is a description of an existential ship, while the latter is a prescription of the conditions to be

9. Experience and Nature, p. 18

10. Ibid., p. 36

11. Logic: The Theory of Inquiry, p. 351

satisfied, if any object is to be called a ship. Therefore, for the sake of clarity, what Dewey calls universal terms may be better regarded as prescriptive terms.

The next point in connection with Dewey's distinction between abstract and concrete terms is that there are two different kinds of concrete terms which must be distinguished from each other. These two different kinds of concrete terms are the descriptive and the evaluative terms. For example, "ship" as a concrete term can be said to describe an existential ship, but it will not be appropriate to say that "good" as a concrete term describes an existential object. The point is that the terms "ship" and "good" have their own unique function, though they are both concrete terms. Therefore, for the sake of clarity, we may be justified in holding the view that there are in all three different kinds of terms, prescriptive, descriptive, and evaluative. Shipness and goodness may both be regarded as prescriptive terms, because one designates a prescription of what it is to be a ship, and the other designates a prescription of what it is to be a value. On the other hand, "ship" is a descriptive term, because it describes an existential ship, whereas "good" is an evaluative term, because it denotes an existential object as a value. This view is essentially consistent with Dewey's position.

The same also holds good of Dewey's theory of propositions. Dewey holds that there are two kinds of propositions, existential

and universal. The content of an existential proposition "consists of observed data or facts."¹² But a universal proposition "has the form of a definition in its logical sense."¹³ For example, "This is a ship" is an existential proposition, because it describes an existential object as a ship. And "If anything is a material body, it attracts other material bodies directly as its mass and indirectly as the square of the distance" is a universal proposition, for it "expresses a condition which any observed thing must satisfy if the property 'material' is groundedly applicable to it."¹⁴ Since what Dewey calls universal propositions are in fact prescriptive of logical conditions, they may be called prescriptive propositions. However, Dewey's theory of existential propositions poses a problem for consideration. The problem is that in Dewey's theory, "This is a ship" and "This is good" are both existential propositions, yet in fact they differ from each other in that the former is descriptive, whereas the latter is evaluative. Therefore, for the sake of clarity, what Dewey calls existential propositions may be divided into two kinds, descriptive and evaluative. Descriptive propositions are indispensable in science, and evaluative propositions are indispensable in any philosophy of value. But prescriptive propositions are indispensable in any inquiry, scientific or philosophic.

12. Ibid., p. 288

13. Ibid., p. 272

14. Ibid., p. 272

From Dewey's standpoint, both science and philosophy are concerned with a body of terms and propositions, but they differ from each other in one important aspect. Scientific terms and propositions are either prescriptive or descriptive, while philosophical terms and propositions are either prescriptive or evaluative. For example, in science, colority is a prescriptive term and color is a descriptive term. As a prescriptive term, colority designates a definition of what it is to be a color, that is, a prescription of conditions which an object should have if it is to be a color. Dewey says,

The scientific conception of colority is of a different logical dimension from that of colors and a color. Colority or being color is defined in terms of rates of vibration and whiteness is defined as the functional correlation of the radiating-absorptive capacity of these vibrations combined in a stated proportion. It is in effect a definition of conditions to be satisfied if a proposition, "This is white," is warranted.¹⁵

A scientific proposition that prescribes a definition of conditions is prescriptive, while a descriptive proposition in science is one that describes an object which exists in time and space. On the other hand, terms and propositions in philosophy are either prescriptive or evaluative. Prescriptive terms in philosophy, like prescriptive terms in science, designate definitions of conditions to be satisfied. Evaluative terms in philosophy designate certain

15. Ibid., p. 258

objects as ends or values to be chosen. Good, right, honest, duty, responsibility, etc., are all evaluative terms. Just as science requires a system of terms well defined, so all terms used in a given philosophical system must be well defined. A prescriptive proposition in a system of philosophy is one that prescribes a definition of a term to be used in that system. An evaluative proposition is one that states the end to be chosen. In Dewey's view, evaluative propositions are essential in any system of philosophy, because each system of philosophy is, as Dewey puts it, "a recommendation of certain types of value as normative in the direction of human conduct."¹⁶ For this reason, philosophy differs from science. Dewey says,

speaking of philosophy (not of science) I have constantly insisted that since it contains value-considerations within itself, indispensable to its existence as philosophy — in distinction from science — it has a "practical," that is a moral function, and I have held that since this element is inherent, the failure of philosophies to recognize and make explicit its presence introduces undesirable properties into them, leading them on one side to make claims of being purely cognitive, which bring them into rivalry with science, and on the other side to neglect of the field in which they may be genuinely significant, that of possible guidance of human activity in the field of values.¹⁷

The need to appraise values by taking into consideration

16. Dewey, John "Philosophy" in Encyclopaedia of the Social Sciences (New York: The Macmillan Company, 1934, XII, 118-128), p. 122

17. Dewey, John Problems of Men, (New York: Philosophical Library, 1946), p. 201

their conditions and consequences is the primary task of Dewey's philosophy. Since in Dewey's view, values must be appraised in terms of their conditions and consequences which must be described by virtue of descriptive propositions of science, it follows that evaluative propositions rest upon descriptive propositions which, in turn, means that philosophy is allied with science. For this reason, Dewey maintains that although the subject-matter of science differs from that of philosophy, yet philosophy finds itself in no opposition to science. As a matter of fact, philosophy cannot be without science, because it is a liaison officer between the conclusions of science and the establishment of man's beliefs about values. Therefore, the reconstruction of philosophy and the development of science go hand in hand.

3. Philosophy must make clear the intrinsic kinship of democracy with science: — Dewey holds that democracy and science are closely related to each other in social reconstruction. The development of science and that of democracy, in his view, go hand in hand. The task of philosophy in this connection is to make clear the close relationship between the two. Dewey says,

There has been, roughly speaking, a coincidence in the development of modern experimental science and of democracy. Philosophy has no more important question than a consideration of how far this may be mere coincidence, and how far it marks a genuine corres-

pondence.¹⁸

In Dewey's view, the development of modern science and of democracy is by no means a mere coincidence, because modern science has developed through the protection of the freedom of individuals which is the heart of democracy. Dewey says, "Science has made its way by releasing, not by suppressing, the elements of variation, of invention and innovation, of novel creation in individuals."¹⁹ Without the growth of democracy, the individuals would have no freedom of exercising their powers of reflection, observation and creation which is the prerequisite of the development of science.

On the other hand, successful maintenance of democracy depends on the appropriate cultivation of science. The reason is that while democracy provides the society with individual powers and potentialities by protecting the freedom of individuals, science provides the society with the authority by bringing "the evidence of observed facts to bear to effect a consensus of conclusions — and even then to hold the conclusion subject to what is ascertained and made public in further new inquiries."²⁰

18. Dewey, John Characters and Events (New York: Henry Holt and Company, Vol. II, 1929), p. 849

19. Dewey, John "Science and the future of society" in J. Ratner (ed.) Intelligence in the Modern World (New York: The Modern Library, 1939, 343-363), p. 358

20. Dewey, John Freedom and Culture (New York: Capricorn Books, 1939), p. 102

Therefore, democracy without science would take the form of laissez faire in social and political affairs, because in that case, each individual would act without adequate authority. From Dewey's standpoint, the important problem of social reconstruction is the relation between authority and freedom. On the one hand, the individuals must have freedom to exercise their powers of inquiry which is the heart of democracy, but on the other hand, they must be prepared to accept the conclusions of science as the source of authority. Hence there should be a union of individual liberty and social authority which means that in social reconstruction, democracy and science must work hand in hand. The task of philosophy in this connection is to make clear this alliance between democracy and science. Dewey concludes,

In consequences, the chief opportunity and chief responsibility of those who call themselves philosophers are to make clear the intrinsic kinship of democracy with the methods of directing changes that have revolutionized science.²¹

In short, according to Dewey, without science, democracy could not possibly succeed, because the freedom of individuals would take the form of laissez faire in social and political affairs due to the absence of authority. Without democracy, science could not possibly develop, because science has made its way by protecting the freedom of individuals to bring the evidence of observed facts to bear to effect a consensus of conclusions.

21. Problems of Men, p. 158

4. The Relationship between Philosophy and Education. —

Dewey holds that there is an intimate relationship between philosophy and education. Positively philosophy is an attempt to discover a small number of "ultimate principles" by which a more consistent and harmonious pattern of life may be established. These broad principles of philosophy must become the guiding principles of education for the following three reasons: In the first place, although philosophic thinking is capable of discovering a small number of "ultimate principles" by which a more consistent and harmonious pattern of life may be established, nevertheless philosophy itself has no power to put such principles into practice. Dewey says,

Unless a philosophy is to remain symbolic — or verbal — or a sentimental indulgence for a few, or else mere arbitrary dogma, its auditing of past experience and its program of values must take effect in conduct.²²

If the broad principles reached by philosophic thinking are to take effect in conduct, there must be a program of education set up in accordance with these principles.

In the second place, as philosophy deals with the problems of men which arise because of widespread and widely felt conflicts in social life, its conclusions which are stated in terms of a small number of broad principles must be brought back to social

22. Democracy and Education, p. 383

life for testing. In Dewey's view, education provides a special social environment in which the principles of philosophy may be tested. This is why Dewey says: "Education is the laboratory in which philosophic distinctions become concrete and are tested."²³

In the third place, unless a program of educational practice is to remain a routine empirical affair or a matter of arbitrary personal preference dictated by instinct and custom, it must be grounded in a comprehensive philosophy. Dewey says,

any theory of activity in social and moral matters, liberal or otherwise, which is not grounded in a comprehensive philosophy seems to me to be only a projection of arbitrary personal preference.²⁴

Educational practice is no exception, it also needs a few guiding principles to direct educators as to what to do and what not to do, so that education of youth may become a more intelligent operation. These guiding principles can, from Dewey's standpoint, be provided by philosophy. As he says,

the business of schooling tends to become a routine empirical affair unless its aims and methods are animated by such a broad and sympathetic survey of its place in contemporary life as it is the business of philosophy to provide.²⁵

For these three essential reasons, Dewey comes to the conclusion that "philosophy may even be defined as the general theory of education."²⁶

23. Ibid., p. 384

24. Problems of Men, p. 203

25. Democracy and Education, p. 384

26. Ibid., p. 383

5. Philosophy must be Distinguished from Social Theory. —

It has previously been stated that in Dewey's view, positively philosophy is an attempt to discover a small number of "ultimate principles" by which the problems of men which originate in the conflicts of social life may be resolved and a more consistent and harmonious pattern of life established. However, instead of proceeding to argue that philosophers must utilize these ultimate principles to construct a system of philosophy which analyzes and systematizes a body of terms and propositions from the standpoint of and for the sake of philosophic discourse, Dewey seems to insist that philosophers must bring these ultimate principles back to the society for testing them. Dewey also declares that philosophers must consider the problem "which is urgently practical, growing out of the conditions of contemporary life."²⁷ He sometimes objects to philosophers' concern for theoretical problems as against the practical problems of life. In fact, there is here something of a paradox in Dewey's thinking. On the one hand, he insists that philosophy must deal with the problems of men, but on the other hand, he declares, "Philosophy cannot of itself resolve the conflicts and dissolve the confusion of the present world."²⁸ If philosophy is an attempt to deal with the

27. The Quest for Certainty, p. 252

28. Problems of Men, p. 16

conflicts of social life, and if it is incapable of resolving these conflicts by itself, the philosopher — qua philosopher — is trying to accomplish the impossible. The paradox may, however, be resolved by drawing a distinction between philosophy and social theory. We may say that philosophy is concerned with the analysis and systematization of a body of terms and propositions from the standpoint of and for the sake of philosophic discourse. On the other hand, social theory may be taken as a program of social practice or social reform. A social theory is formulated from the standpoint of and for the sake of social action. This should not, however, be taken to mean that philosophy has no bearing on the problems of men; it only means that philosophers are primarily concerned with the analysis and systematization of terms and propositions in relation to one another, they are not directly concerned with the immediate solution of the practical problems of men.

We may, however, agree with Dewey that philosophy originates in the conflicts of social life, for if men were not confronted with the problems of moral life, ethics, for example, would hardly come into existence. We may also agree with Dewey that philosophy can have bearing upon the problems of men. Nevertheless we may question Dewey's contention that philosophy is always an attempt to discover a small number of ultimate principles by which the problems of men are to be solved and a more consistent and har-

monious pattern of life established. Instead, we may maintain that philosophy is an attempt to discover a small number of broad principles under the direction of which a body of terms and propositions may be analyzed and systematized from the standpoint of and for the sake of philosophic discourse. Hence philosophy is directly concerned with the analysis and systematization of knowledge as distinct from a theory of social action which is directly concerned with social practice. The important thing to bear in mind is that Dewey's conception about the nature and function of philosophy is based on an assumption that philosophic formulations can provide some sort of basis for theories on social, practical, educational ends and procedures.

CHAPTER II

THE GOAL OF INQUIRY

It can be said that inquiry is the life-blood of Dewey's philosophy. Dewey has time and again reminded us that the demand for a philosophy arises whenever there is the need of integration of the conflicting beliefs in social life and that one of the most urgent problems of contemporary life is the conflict between our beliefs about matters-of-fact and our beliefs about values because of the entrance of modern science into our culture. In Dewey's view, if man's beliefs about values are to be consistent with his scientific beliefs about matters-of-fact, they must also be reached as a result of the operation of competent inquiries. All philosophies and scientific theories must be placed and evaluated within "the context of the use they perform and the service they render in the context of inquiry."¹ They must be taken as means of promoting the "efficient conduct of inquiry."² Hence an essential objective of Dewey's philosophy is to specify the directions in which man's beliefs about values can be grounded upon the conclusions of inquiry.

For Dewey, inquiry is a short name for the effective pro-

1. John Dewey On Experience, Nature and Freedom, p. 138

2. Ibid., p. 144

cedures of resolving the problematic situation. As Dewey puts it, inquiry is the controlled or directed transformation of "an indeterminate problematic situation into a determinate resolved one."³ Whenever we are confronted with a problematic situation, we must perform inquiry, so that the problematic situation may be resolved. Dewey explains what he means by problematic situation in the following way:

it is of the very nature of the indeterminate situation which evokes inquiry to be questionable; or, in terms of actuality instead of potentiality, to be uncertain, unsettled, disturbed.⁴

It is by no means easy to define what Dewey means by a problematic situation and its resolution. Suppose, for example, a man is lost in the woods, he is confronted with a problematic situation which must be resolved. The man may inquire into the situation so that a correct line of action may be taken in order to get out of the woods. When the man successfully gets out of the woods, the problematic situation is resolved. If our car breaks down, for instance, we are confronted with a problematic situation, and when a mechanic repairs the car, so that it starts again, the problematic situation is resolved. Another example of the problematic situations is given by Dewey as follows:

In washing tumblers in hot soapsuds and placing them mouth downward on a plate, I noticed that

3. Logic: The Theory of Inquiry, p. 159

4. Ibid., p. 105

bubbles appeared on the outside of the mouth of the tumblers and then went inside. Why ?⁵

This is also a problematic situation. After conducting an inquiry, the inquirer concluded that bubbles appeared on the outside of the mouth of the tumblers, because air inside the tumblers had expanded. Thus, the problematic situation is resolved.

According to Dewey, when we are confronted with a problematic situation, we must conduct an inquiry, so that the problematic situation may "receive a satisfactory objective reconstruction."⁶ Therefore, the goal of inquiry is the satisfactory objective reconstruction of the problematic situation. Many of Dewey's critics have pointed out that Dewey had introduced certain psychological elements into his notion of inquiry. Russell, for example, suggested,

One difficulty, to my mind, in Dr. Dewey's theory, is raised by the question: What is the goal of inquiry ? The goal, for him, is not the attainment of truth, but presumably some kind of harmony between the inquirer and his environment.⁷

It is true that when Dewey claims that inquiry is the transformation of a problematic situation into a resolved one, his statement does imply that the goal of inquiry is the harmony between the inquirer and his environment. This fact becomes more explicit

5. Dewey, John How We Think (Boston: D. C. Heath and Co., revised edition, 1933), p. 93

6. Logic: The Theory of Inquiry, p. 161

7. Russell, Bertrand An Inquiry into the Meaning and Truth (New York: W. W. Norton and Company, INC. 1940), p. 404

when Dewey states,

If inquiry begins in doubt, it terminates in the institution of conditions which remove need for doubt. The latter state of affairs may be designated by the words beliefs and knowledge. For reasons that I shall state later I prefer the words "warranted assertibility."⁸

Dewey states later that he prefers the words "warranted assertibility" to the words belief and knowledge, because the former are free from the ambiguity involved in the latter. But the point here is that when Dewey advocates that inquiry begins in doubt and terminates in the institution of conditions which remove need for doubt, he is plainly introducing psychological ("subjective") elements into inquiry, and his statement implies that the goal of inquiry is the harmony between the inquirer and his environment. For example, Dewey tells us that in washing tumblers in hot soap-suds and placing them mouth downward on a plate, an inquirer noticed that bubbles appeared on the outside of the mouth of the tumblers and then went inside. The inquirer was then in doubt as to why bubbles appeared on the outside of the mouth of the tumblers. Therefore, he was faced with a problematic situation and his inquiry did begin in doubt. He then proceeded to investigate and experiment and finally came to the conclusion that bubbles appeared on the outside of the mouth of the tumblers, because air inside the tumblers had expanded. Hence the problematic

8. Logic: The Theory of Inquiry, p. 7

situation was resolved. Supposing that another inquirer was also faced with a similar problematic situation, but came to the conclusion that bubbles appeared on the outside of the mouth of the tumblers, because air inside the tumblers had contracted. Hence the problematic situation he was faced with was also resolved. If inquiry begins in doubt and terminates in the institution of conditions which remove need for doubt, it will follow that both men had successfully concluded their inquiries, because their inquiries had terminated in the institution of conditions which removed need for doubt. Again, if inquiry is the transformation of a problematic situation into a resolved one, it will follow that both men had successfully concluded their inquiries, because they had resolved their problematic situations. As a matter of fact, however, the conclusion reached by the first inquirer was diametrically opposed to the conclusion reached by the second inquirer. This is the reason that in reaction to Dewey's theory of inquiry, Russell pointed out,

For those who make "truth" fundamental, the difficulty in question does not arise. There is need for doubt so long as there is an appreciable likelihood of a mistake. If you add up your accounts twice over, and get different results, there is "need for doubt;" but that is because you are persuaded that there is an objectively right result. If there is not, if all that is concerned is the psychological fact of inquiry as an activity stimulated by doubt, we cannot lay down rules as to what ought to remove the need for doubt: Inquiry can no longer be regulated by canons. To say that one man is a better inquirer

than another can only mean that he allays more doubts, even if he does so by a brass band and ingenious spot-lighting.⁹

Russell's point is that the object of doubt must be something that can be objectively determined. For example, we may be in doubt as to whether two and two makes four, and after we have figured out the result, our inquiry has terminated in institution of the objective result which removes need for doubt. But whether or not two and two makes four can be objectively determined. Therefore, when Dewey says that inquiry is the transformation of a problematic situation into a resolved one and suggests that inquiry begins in doubt and terminates in institution of conditions which remove need for doubt, he is introducing psychological elements into his theory. In short, Dewey's theory of inquiry implies that the goal of inquiry is the state of harmony between the inquirer and his environment. This is clear from Dewey's own statement:

inquiry grows out of an earlier state of settled adjustment, which, because of disturbance, is indeterminate or problematic (corresponding to the first phase of tensional activity), and then passes into inquiry proper, (corresponding to the searching and exploring activities of an organism); when the search is successful, belief or assertion

9. Russell, Bertrand "Dewey's New Logic" in Paul Arthur Schilpp (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939, 135-156), p. 148

is the counterpart, upon this level, of reintegration upon the organic level.¹⁰

What Dewey is trying to say is that when the harmony between an inquirer and his environment is disturbed, the inquirer must begin to inquire into the situation and try to establish a new state of harmony. Hence the harmony between the inquirer and his environment is the goal of inquiry. This is clearly one of Dewey's views.

If, however, we examine Dewey's theory of inquiry more closely, we will find a very different view propounded. According to this view, the goal of inquiry is the attainment of belief, knowledge, or truth. Dewey says that as an empiricist, he is "concerned with truth and falsity as having existential application, and as something determined by means of inquiry into material existence."¹¹ For Dewey, belief, knowledge, and truth are three different names for the same product of competent inquiries which is also termed "warranted assertion". Dewey argues that although inquiry begins in doubt and terminates in institution of conditions which remove need for doubt, nevertheless truth must not be identified with removal of doubt. Removal of doubt

10. Logic: The Theory of Inquiry, p. 34

11. Dewey, John "Experience, Knowledge, and Value" in Paul Arthur Schilpp (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939, 515-608), p. 574

may result when the inquiry reaches its conclusion, but it does not enter in any way into the determination of the truth of the conclusion of inquiry. The reason is that truth for Dewey is objective and subject to public verification. Dewey says,

The best definition of truth from the logical standpoint which is known to me is that of Peirce: "The opinion which is fated to be ultimately agreed to by all who investigate is what we mean by the truth, and the object represented by this opinion is the real."¹²

When we claim that a statement is true, if and only if it is fated to be ultimately agreed to by all who investigate, we mean that whether a given statement is true or false does not depend on the subjective conviction of any one individual. Hence removal of doubt is irrelevant to the truth of a statement. We may illustrate this point by recurring to our simple example, bubbles appeared on the outside of the mouth of the tumblers. When the first inquirer concluded that bubbles appeared on the outside of the mouth of the tumblers, because air inside the tumblers had expanded, the truth of the conclusion of his inquiry can be publicly determined and is independent of his personal comfort or discomfort. By the same token, when the second inquirer concluded that bubbles appeared on the outside of the mouth of the tumblers, because air inside the tumblers had contracted, the conclusion of his inquiry was false, in spite of the fact that his doubt was

12. Logic: The Theory of Inquiry, p. 345

removed. Dewey has made this point quite explicit when he said,

The only desire that enters, according to my view, is desire to resolve as honestly and impartially as possible the problem involved in the situation. "Satisfaction" is satisfaction of the conditions prescribed by the problem. Personal satisfaction may enter in as it arises when any job is well done according to the requirements of the job itself; but it does not enter in any way into the determination of validity, because, on the contrary, it is conditioned by the determination.¹³

Therefore, according to this view, the goal of inquiry is the attainment of truth. The question to be raised at this point is: What kind of truth does Dewey have in mind when he tells us that the goal of inquiry is the attainment of truth? To this question, Dewey's answer is that in general there are three kinds of truth to be attained in inquiry, namely, first, the true connections between cause and effect; second, the true connections between means and consequences; third, the true connections between means and ends. We may employ three problematic situations to illustrate how these three kinds of connections can be the goal of inquiry.

To illustrate the connections between cause and effect as the goal of inquiry, it may prove convenient to recur to our simple example, bubbles appeared on the outside of the mouth of the tumblers. The goal of inquiry with regard to this problematic situation is to discover the connection between the expansion of air inside the tumblers as cause and the appearance of bubbles on

13. "Experience, Knowledge and Value" p. 572

the outside of the mouth of the tumblers as effect. On the other hand, when an experimental psychologist tries to determine how people would react, if certain environmental conditions were introduced, the goal of his inquiry is to discover the connection between the environmental conditions introduced as means and people's reaction as consequences. If, again, we consider the case of a patient and the inquiry of the physician, it is evident that the goal of this inquiry is to discover the connection between something as means and the patient's health as end. From Dewey's point of view, these three kinds of connections are objective and empirically verifiable. Moreover, they are closely related to each other. That is, means-ends connections are based upon means-consequences connections which are, in turn, based upon cause-effect connections. Dewey says,

In short, all propositions about policies to be pursued, ends to be strived for, consequences to be reached are propositions about subject-matters having the formal relation means-consequences, and are, in the sense defined, causal propositions.¹⁴

In other words, according to Dewey, all means-ends connections must be based upon the connections between things as means and other things as consequences, which connections must be themselves grounded in empirically tested connections of cause and effect. Therefore, all means-ends connections are also means-consequences

14. Logic: The Theory of Inquiry, p. 461

connections, but not vice versa. By the same token, all means-consequences connections are also the connections of cause and effect, but not vice versa. Suppose, for example, A is the means of attaining B, we may say that A as means is connected with B as consequences, and we may also say that the connection between A and B is one of cause and effect. However, the mere fact that A as means is connected with B as consequences or that A and B are causally connected does not necessarily imply that A is a means of achieving the end B.

It has been previously stated that in Dewey's view, the most significant problem of contemporary life is the conflict between man's beliefs about values and his beliefs about matters-of-fact. For this reason, the positive task of philosophy is to discover a small number of "ultimate principles" by which these two kinds of beliefs may be reintegrated. It has also been previously stated that the fundamental principle of Dewey's philosophy is that if man's beliefs about values and his beliefs about matters-of-fact are to be reintegrated, they must be based upon the conclusions of competent inquiries. As we have seen, the goal of inquiry, according to Dewey's second view, is the establishment of three kinds of true connections, namely, first, the true connections between cause and effect; second, the true connections between means and consequences; third, the true connections between means and ends. The important question that arises is: What does this

goal of inquiry have to do with the reintegration of man's beliefs about values and his beliefs about matters-of-fact ? The answer to this question is that in Dewey's view, when we pass value judgments, we are, in fact, determining the connections between some things as means and other things as ends, and these connections are based upon means-consequences connections which are, in turn, based upon cause-effect connections. Hence, beliefs about values are, in fact, beliefs about matters-of-fact. Dewey advocates,

Propositions about valuations have, indeed, been shown to be possible... They are propositions about matters-of-fact. The fact that these occurrences happen to be valuations does not make the propositions valuation-propositions in any distinctive sense.¹⁵

However, Dewey points out later that propositions about valuations do differ, in a significant way, from other factual propositions, because in the former cases, the ends are "not set forth as a prediction of what will happen but as something which shall or should happen."¹⁶ In other words, propositions about valuations are distinctive, for the reason that they state the connections between things as means and other things as ends.

There is some indication that the position which Dewey really wants to maintain is that the goal of inquiry is the attainment

15. Dewey, John Theory of Valuation (Chicago: University of Chicago Press, 1939), p. 19

of truth. He categorically denies that the purely psychological harmony between the inquirer and his environment is the goal of inquiry according to his theory. For example, he explicitly rejects Russell's interpretation of his theory by asserting,

Mr. Russell proceeds first by converting a doubtful situation into a personal doubt, although the difference between the two things is repeatedly pointed out by me. I have even explicitly stated that a personal doubt is pathological unless it is a reflection of a situation which is problematic. Then by changing doubt into private discomfort, truth is identified with removal of this discomfort.¹⁶

Apparently, Dewey agrees with Russell that there is need for doubt so long as there is an objective truth involved. But he argues that Russell is wrong in interpreting him as holding the view that doubt means simply private discomfort. What Dewey wants to assert is that in his theory, need for doubt presupposes the existence of objective connections between things as cause or means and other things as effect, consequences, or ends. A situation is problematic, when such connections involved are not determined. Suppose, for example, a man is found dead under such unusual circumstances as to create our suspicion, so we are confronted with a problematic situation. To say that we are in doubt in the present situation, for instance, implies that there is an objective truth involved which has not yet been discovered, namely, the true connection between something as cause and the man's death as effect.

16. "Experience, Knowledge, and Value" p. 572

Hence the goal of inquiry is to discover this true connection.

If in Dewey's theory, need for doubt presupposes the existence of objective connections between things as cause or means and other things as effect, consequences, or ends, it will follow that in theory Dewey's two goals of inquiry — the harmony between the inquirer and his environment and the attainment of truth — are not incompatible with each other. The reason is that when an inquirer is in doubt, the objects of his doubt are always some objective connections between things as cause or means and other things as effect, consequences, or ends. And if the objects of doubt are always the objective connections between things as cause or means and other things as effect, consequences, or ends, it will follow that once the objective connections involved in a problematic situation are discovered, need for doubt must be removed. After need for doubt is removed, the harmony between the inquirer and his environment is established. This means that the two goals of inquiry can be achieved simultaneously. This is precisely why Dewey insists upon the fact that when the inquiry is successful, "belief or assertion is the counterpart... of reintegration upon the organic level."¹⁷ Dewey's statement implies that belief is the counterpart of the harmony between the inquirer and his environment. When the inquiry reaches its conclusion, the inquirer establishes his belief and thus stays in

17. Logic: The Theory of Inquiry, p. 34

harmony with his environment. However, it does happen not infrequently that the belief which the inquirer establishes is false, and thus the inquiry is incompetent. Because the truth or falsehood of a belief always depends upon the real connections between things as cause or means and other things as effect, consequences, or ends. Such connections lie outside the belief itself. Therefore, to say that an inquiry is competent is equivalent to saying that it has reached a true belief. For this reason, Dewey seems right in insisting upon the fact that personal satisfaction or removal of doubt or the harmony between the inquirer and his environment may result from the fact that the inquiry is successfully concluded, but it does not enter into the determination of whether the inquiry is competent, or the belief established is true or false. Therefore, Dewey's original statement that inquiry begins in doubt and terminates in the institution of conditions which remove need for doubt may be more precisely translated into its logical equivalent, namely, inquiry begins in doubt about the connections between things as cause or means and other things as effect, consequences, or ends, and terminates in the institution of such connections which removes need for doubt.

If we interpret Dewey's theory of inquiry along this line, a great deal of confusion and ambiguity inherent in Dewey's theory can be avoided. One of the most confusing aspects of his theory consists in his statement, "Our beliefs and judgments are true in

the degree in which they 'work'".¹⁸ This statement is not infrequently interpreted as meaning, for instance, that if a miserable man becomes happy after he comes to believe in the existence of God, then his belief that God exists is true, because it works. Moore's interpretation of James' concept of truth is a typical example. Moore said,

It seems to be very difficult to be sure that the belief in an eternal hell has not been often useful to many men, and yet it may be doubted whether this idea is true. And so, too, with the belief in a happy life after death, or the belief in the existence of a God; it is, I think very difficult to be sure that these beliefs have not been, and are not still, often useful, and yet it may be doubted whether they are true.¹⁹

Whether Moore interpreted James' concept of truth correctly or not is not relevant here. The point is that when Dewey says that beliefs are true in the degree in which they work, he must be referring to beliefs about the connections between things as means and other things as ends. In Dewey's theory, when a miserable man becomes happy, because he comes to believe in the existence of God, his belief that there is a connection between his belief in the existence of God as means and his happiness as end is true. The fact that a great deal of ambiguity is involved in

18. Dewey, John "Truth" in A Cyclopedia of Education (New York: The Macmillan Company, 1913, Vol. V, 632-633), p. 633

19. Moore, G. E. "William James' 'Pragmatism'" in his Philosophical Studies (Totowa, New Jersey: Littlefield, Adams and Co., 1965, 97-146), p. 114

Dewey's theory of truth can not be denied. For example, he states,

That which guides us truly is true — demonstrated capacity for such guidance is precisely what is meant by truth. The adverb "truly" is more fundamental than either the adjective, true, or the noun, truth. An adverb expresses a way, a mode of acting.²⁰

It is very odd to say that a mode of acting is true or false. But if we interpret Dewey as meaning that our beliefs about the connections between a mode of acting as a means and something as an end is either true or false, his statement seems to make perfectly good sense.

20. Dewey, John Reconstruction in Philosophy (Boston: The Beacon Press, 1963), p. 156

CHAPTER III

DEWEY'S THEORY OF EVALUATION (I)

(i) Introduction

Dewey holds that there is a distinction between universal and existential terms, and that this distinction is a fundamental one. Dewey says that any given term "is either existential or conceptual in reference. All other distinctions are either aspects of this fundamental distinction in logical office or are derived from it".¹ After drawing this fundamental distinction, Dewey proceeds to contend that all intelligible terms must designate something, but the difference between universal and existential terms consists in what is designated. Dewey says,

Any intelligible word designates something; otherwise it is a mere combination of sounds or visible marks, not a word at all. Xypurt, for example, designates nothing whatever in the English language. It is not a word. Denotative or existential terms and attributive or conceptual words are alike in designating something: they both have signification, for the meaning of words used can be understood. The important logical matter is the difference in what is designated.²

According to Dewey, an existential term designates singular objects which have existence in time and space, while its extension designates certain kinds of existential objects, and its intension designates the existential objects belonging to a kind. For ex-

1. Logic: The Theory of Inquiry, p. 351

2. Ibid., p. 360

ample, Dewey holds that singular ships "are denoted by ship"³; the extension of ship designates "the kinds of ships that exist or have existed or will exist;"⁴ the intension of ship designates "a set of conjoined traits employed to describe a kind."⁵ On the other hand, a universal term designates a definition of a category, and its comprehension designates the sub-categories of a category. For example, the universal term triangularity designates a definition of being triangular, and its comprehension designates various ways of being triangular, e.g., right-angled, scalene and isosceles. Dewey says,

The use of the word comprehension for this purpose is arbitrary as far as the mere word is concerned. It is not arbitrary as far as a distinct logical form, demanding some word by which to designate it, is concerned. Right-angled, scalene and isosceles constitute... the logical scope or comprehension of triangularity.⁶

Dewey provides us with a variety of examples to illustrate his point. He tells us that polygon used as a universal term designates a definition of polygon in geometry and its comprehension designates different ways of being polygonal, e.g., triangle, rectangle, etc.. Again, the universal term colority designates a definition of what it is to be a color, and its comprehension

-
- 3. Ibid., p. 361
 - 4. Ibid., p. 361
 - 5. Ibid., p. 362
 - 6. Ibid., p. 361

designates different ways of being a color, e.g., whiteness, blueness, yellowness, etc.. In Dewey's view, universal and existential terms function conjugately with each other in inquiry. Take, for instance, the functional relationship between shipness and ship. Dewey says,

When questions arise as to whether or not a certain object is of the kind "ship," a definition of what it is to be a ship is demanded. Suppose the definition consists of the following (multiplicative) conjunction of characters; floating on water, having curved sides, of sufficient capacity to transport a considerable number of goods and persons, and being used regularly for commercial transportation of goods and passengers. Such a term is not descriptive of traits which form the meaning of ship; they are prescriptions of the traits an object should have if it is to be a ship. The terms in question are all abstract. They define shipness; they do not describe existential ships.⁷

A definition is a prescription of the traits which an object should have if it is to belong to the category defined. For example, the statement that this object falls within the category of machines implies that the object has the traits in terms of which "being machinery is defined."⁸ Colority as a category may be defined in terms of rates of vibration, and whiteness as a subcategory of colority may be defined as the functional correlation of the radiating-absorptive capacity of these vibrations combined in a stated proportion. In Dewey's theory, fatherhood, length, magnitude,

7. Ibid., pp. 355-6

8. Ibid., p. 273

colority, whiteness, shipness, paternityship, smoothness, are universal (abstract or conceptual) terms; father, color, ship, man, are existential or concrete terms.

(ii) The Meaning of Value

Dewey holds that the word "value" may be used either as a concrete noun or an abstract noun. When value is used as a concrete noun, it is an existential term, and when used as an abstract noun, it is a universal term. Dewey says that there is an

ambiguity in the term "value," it being both a concrete and an abstract noun, in the former case designating (although metaphorically) a thing having value-quality and in the latter sense designating an essence, an entity of the sort that the scholastics called ens rationis.⁹

Value as an existential term designates something having value-quality. For example, when we say that this table is a value, or this book is a value, we are using value as an existential term to designate the table and the book in question. When Dewey tells us that to the question as to whether there is any such thing as value which does not designate some particular thing, the answer "is definitely negative",¹⁰ he is obviously using value as an

9. Dewey, John "The meaning of value" Journal of Philosophy, XXII, 1925, 126-133, p. 126

10. Dewey, John "The field of 'value'" in Ray Lepley (ed.) Value: A Cooperative Inquiry (New York: Columbia University Press, 1949, 64-77), p. 66

existential term. As all existential terms designate things existing in time and space, it follows that whenever we use value as an existential term, we are always referring to some particular thing which exists in time and space. On the other hand, value as a universal term designates something abstract, and we may, if we wish, call this something an essence or entity, or an abstract class of things. There is no harm in regarding what is designated by value as a substance, an entity, or an abstract class of things. But one must remember that substance and entity are not here used to refer to any metaphysical existence. Dewey says,

when value is used to designate any special class or category of things, it is used as an abstract noun. If language had provided us with a special abstract noun (such as goodness in connection with good), say valuity or valueness, a good deal of ambiguous discussion resulting in incoherent conclusions might have been avoided.¹¹

When one asserts that value as a universal term designates a substance or an entity, one must be prepared to explain what is really meant by "substance" and by "entity" in such a general statement. A traditional metaphysician would be inclined to explain what he means by "substance" and "entity" by referring to thing-in-itself or the eternal form of good. However, in Dewey's view, by "substance" or "entity", we do not have to refer to any thing-in-itself or eternal form of good. When we strip the state-

11. Ibid., p. 66

ment of its metaphysical associations we mean that we are referring to the definition or criterion of value which all things in the concrete must satisfy if they are to be properly called values. That is to say, what we are really referring to when we use value as a universal term is the definition of value according to which value as an existential term should be used. For example, we cannot say that this table is a value, unless the table satisfies the definition of value. To say that the table is a value is equivalent to saying that it satisfies the definition of value to which value as a universal term refers. Therefore, in Dewey's theory, value as a universal term and value as an existential term function conjugately with each other in the determination of value judgments. They function conjugately with each other for the following two reasons: In the first place, value as an existential term is indispensable to value judgments, because we must use it to designate the concrete values we have attained. In the second place, value as a universal term is also indispensable to value judgments, for we cannot regard any thing as a value, unless the thing in question satisfies the definition of value to which value as a universal term refers. Dewey says,

Speaking literally, there are no such things as values,... There are things, all sorts of things, having the unique, the experienced, but undefinable, quality of value. Values in the plural, or a value in the singular, is merely a convenient abbreviation for an object, event, situation, res, possessing the quality. Calling the thing a value is like calling a ball struck in baseball, a hit or a foul...

But while in discussing baseball a sense of the concrete context will save one from making independent entities out of hits and fouls, discussion of the theory of values and goods, whether moral or esthetic, manifests a tendency to forget the concrete things to which the value-quality is attached.¹²

What Dewey is saying is that all things we observe are facts, they can be called values, if and only if they satisfy the definition of value, just as a ball struck must satisfy a certain criterion, if it is to be called a hit or a foul. In Dewey's theory, the function of value as a universal term is to refer to the definition or criterion of value which all concrete things or facts must satisfy if they are to be called values. Therefore, to say that some factual things are values is the same as to say that they satisfy the definition of value to which value as a universal term refers. Dewey says,

I have held that the only thing which can be intelligibly discussed concerning value as such is the existential question — the question of how values come to be, i.e., how things come to possess the quality of value.¹³

To say that some factual thing is a value means that the thing in question possesses the quality of value which, in turn, means that it satisfies the definition of value. Hence the question of how values come to be or how things come to possess the quality of value is equivalent to the question of what definition of value a

12. Dewey, John "Values, liking, and thought" Journal of Philosophy, XX, 1923, 617-622, p. 617

13. "The meaning of value" p. 128

thing must satisfy, if it is to be called a value. This is the most fundamental question to be answered in Dewey's theory of value judgments.

(iii) Value Judgments

Before we proceed to consider Dewey's answer to the question as to what criterion of value a thing must satisfy, if it is to be called a value, it may prove useful for us to take up a relevant point for consideration. Dewey tells us that value judgments are not essentially different from other judgments. Dewey says, "I have denied that as judgments, or in respect to method of inquiry, test, and verification, value-judgments have any peculiar or unique features."¹⁴ He further points out that "there is nothing whatever that methodologically (qua judgment) marks off 'value-judgments' from conclusions reached in astronomical, chemical, or biological inquiries."¹⁵ However, Dewey is by no means denying that value judgments are, in some sense, different from other judgments. As a matter of fact, in Dewey's view, value judgment differs from other judgments in, at least, two aspects, namely, the nature of its subject-matter and its degree of human importance. Dewey says that value-judgment is "simply a mode of judgment like any other form of judgment, differing in that its subject-

14. The Problems of Men, p. 258

15. "The field of 'value'" p. 77

matter happens to be a good or a bad instead of a horse or planet or curve."¹⁶ Dewey's point is that value judgments, in distinction from other judgments which are merely concerned with the connections between things as cause or means and other things as effect or consequences, are primarily concerned with the connections between things as means and other things as consequences or ends. Dewey says that value judgments are distinct from other judgments in that they "inherently involve the means-end relationship."¹⁷ However, Dewey deliberately plays down the importance of this difference, for, in his view, it is quite natural that the subject-matter of one form of judgment be different from that of another form of judgment. This is the reason that when speaking of value-judgments, Dewey declares, "They differ from other judgments, of course, in the specific material they have to do with. But in this respect inquiries and judgments about potatoes, cats, and molecules differ from one another".¹⁸ From Dewey's point of view, the second difference between value-judgments and other judgments is far more important. This difference consists in the degree of human importance. Dewey says,

The genuinely important difference resides in the fact of the much greater importance with respect to

16. Dewey, John Essays in Experimental Logic (New York: Dover Publications, INC., 1916), p. 354

17. Theory of Valuation, p. 52

18. Problems of Men, p. 258

the conduct of life-behavior possessed by the special subject-matter of so-called value-judgments. For in comparison with the deep and broad human bearing of their subject-matter, the subject-matter of other judgments is relatively narrow and technical.¹⁹

The subject-matter of other judgments is relatively narrow and technical in comparison with the subject-matter of value judgments, because the former consists merely in the connections between things as cause or means and other things as effect or consequences which are narrow and technical, while the latter consists in the means-consequences as well as means-ends connections which have deeper and broader human bearing, because of the involvement of the ends to be pursued.

Dewey holds that a value judgment always takes place in connection with a problematic situation. He says,

we never experience nor form judgments about objects and events in isolation, but only in connection with a contextual whole. This latter is what is called "situation".²⁰

From Dewey's point of view, the statement that the object A is a value is an incomplete value judgment. A complete value judgment must be stated as "The object A is a value in this situation" which is equivalent to the statement, "I ought to possess the object A in this situation". Dewey says, "My theme is that a judgment of value is simply a case of a practical judgment, a judgment

19. Ibid., p. 258

20. Logic: The Theory of Inquiry, p. 66

of the doing of something."²¹ This implies that the following statements can be properly regarded as value judgments: "I should go to college in the situation I live now", "John should give special consideration to his parents in the present situation", "I ought to buy a suit in the present situation". In Dewey's view, the statement that the object A is a value in the present situation I live is equivalent to the statement that I ought to possess the object A in the present situation. Dewey holds that just as value judgments always take place in connection with a problematic situation, so value must be defined in terms of the conditions and consequences in connection with a problematic situation. The statement that value must be defined in terms of the conditions and consequences of the problematic situation under investigation implies that whenever we are inquiring about the value of an object, we must inquire into the conditions and consequences in connection with the situation in which the judgment of the object takes place. Dewey says,

evaluative statements concern or have reference to what ends are to-be-chosen, what lines of conduct are to-be-followed, what policies are to-be-adopted. But it is morally necessary to state grounds or reasons for the course advised and recommended. These consist of matter-of-fact sentences reporting what has been and now is, as conditions, and of estimates of consequences that will ensue if certain of them are used as means. For in my opinion sentences about what should be done, chosen, etc., are sentences,

21. Essays in Experimental Logic, p. 358

propositions, judgments, in the logical sense of those words only as matter-of-fact grounds are presented in support of what is advised, urged, recommended to be done — that is, worthy of being done on the basis of factual evidence available.²²

From Dewey's point of view, a value judgment must be supported by factual evidence available, and by factual evidence he means the estimate of conditions and consequences. Suppose, for example, John states that he ought to buy a suit, his statement "I ought to buy a suit" is a value judgment. According to Dewey, the value judgment in question must be supported by factual evidence which includes the consideration of conditions of the situation in which John finds himself, and the consequences which John's action ensues. That is to say, in order to justify his judgment, John must present evidence to show that the present conditions of the situation in which he lives demands a suit, and he must also present evidence to show that his possession of a suit will bring the problematic situation to a satisfactory outcome. This is what Dewey means when he asserts that a value judgment must be supported by the conditions and consequences. The verification of a value judgment is to determine whether the conditions and consequences which support it do actually exist now or will come into existence in the future. Dewey gives us an illuminating example. He holds

22. Dewey, John "Ethical subject-matter and language" Journal of Philosophy, XLII, 1945, 701-712, p. 711

that if the question is asked as to why a suit of clothes is a value to John, the answer is that "because the situation he lives demands it."²³ In other words, a suit of clothes is a value because it is "something lacking or absent in the situation — something that must be supplied if the empirical situation is to be complete".²⁴ Verification is intended to determine two things: first, the conditions of the situation, i.e., whether it is really the case that the object in question is something which must be supplied if the situation is to be resolved; second, the consequences, i.e., whether it is really the case that the problematic situation is brought to a satisfactory solution when the object is supplied.

One may say with considerable confidence that central to Dewey's ethics is the attempt to employ science in value-judgments. As we have seen, from Dewey's point of view, value must be defined in terms of the conditions and consequences in connection with an empirical situation, and since the conditions and consequences are empirically determinable, it is natural for Dewey to state that science "is the supreme means of the valid determination of all valuations in all aspects of human and social life."²⁵ Dewey tries to illustrate his point by saying that when a physician has

23. Essays in Experimental Logic, p. 382

24. Theory of Valuation, p. 36

25. Ibid., p. 66

to pass a practical judgment in the case of a particular patient, the course of action he takes must be based on the knowledge of conditions and consequences, namely, both "on the ground of what his examination discloses is the 'matter' or 'trouble' with the patient"²⁶ and "on the ground of its capacity to produce a condition in which these troubles will not exist."²⁷ The question as to whether Dewey is right in saying that value can be defined in terms of "conditions and consequences" remains to be seen.

(iv) Critical Analysis

As Dewey maintains that value must be defined in terms of the conditions and consequences, it is extremely important to find out what he means by these two terms. There is a distinction between conditions and consequences, for the former always refer to the past and the present, while the latter always refer to the future which is set forth "as something which shall or should happen."²⁸ One may say that when Dewey talks about conditions, he is referring to the conditions of the situation in which a man finds himself. Dewey says,

valuation takes place only when there is something the matter; when there is some trouble to be done away with, some need, lack, or privation to be made good, some conflict of tendencies to be resolved by means of changing existing conditions.²⁹

-
26. Ibid., p. 46
 27. Ibid., p. 46
 28. Ibid., p. 21
 29. Ibid., p. 34

Although it can be said that in Dewey's theory, the trouble of a situation may refer to a great variety of different things, nevertheless it is quite obvious that when Dewey discusses the trouble to be done away with in a valuation situation, he is primarily concerned with the conflict of desires. For example, Dewey advocates that the trouble in an existing situation springs from "the fact that there is something lacking, wanting, in the existing situation as it stands, an absence which produces conflict in the elements that do exist."³⁰ What Dewey is really anxious to do is to connect valuation with the situation in which desires arise. It is not difficult to understand what Dewey means by desires. By desires, he means such things as that a hungry man desires food, a child desires candy, a poor man desires wealth, a sick man desires health, a miserable man desires comfort, a lonely man desires friendship, etc.. In short, desires in Dewey's sense are either biological or sociological. Dewey says that desire

instead of being merely personal, is an active relation of the organism to the environment (as is obvious in the case of hunger), a factor that makes the difference between genuine desire and mere wish and fantasy. It follows that valuation in its connection with desire is linked to existential situations and that it differs with differences in its existential context.³¹

According to Dewey, valuation takes place when desires arise in an existential situation, and it takes place in terms of inquiry.

30. Ibid., p. 33

31. Ibid., p. 16

Inquiry has two tasks to perform: first, to determine whether the object is a means for realizing the end imposed by the actual conditions of the existing situation; second, to determine the consequences that the particular end-in-view which is set up will, if acted upon, actually produce. It must be observed that the end involved refers to the satisfaction of a desire which occurs in a situation. For example, the end imposed by the situation in which a hungry man finds himself is eating, and food is a means for realizing that end.

However, Dewey is, in fact, using the word "consequences" in two different senses, one individualistic and the other socialistic; and, as will be seen, in the course of his discussion of value judgments, he is moving from one sense of consequences to the other. In the first place, Dewey holds that in value judgments, particular satisfactions of particular desires must be "placed as integral parts of conduct as a consistent harmonious whole."³² This means that to assert that the object A is valuable is equivalent to asserting that our enjoyment of the object A is consistent with our enjoyment of other objects B, C, D, which are also desired. Dewey says,

In other words, there is nothing intrinsically bad about raw impulse and desire. They become evil in

32. Dewey, John & Tufts, James H. Ethics. Revised edition (New York: Henry Holt and Company, 1932), p. 228

contrast with another desire whose object includes more inclusive and more enduring consequences.³³

What Dewey is actually saying is that the real value of an object must be determined in relation to the whole system of our personal desires, and that judgment of the value of an object is to determine whether the object in question can be placed as an integral part of the objects of desire as a consistent harmonious whole. This means that the object of desire which unifies in a harmonious way one's whole system of desires is more desirable than the object which satisfies a single and independent desire. Dewey says,

If values did not get in one another's way, if, that is, the realization of one desire were not incompatible with that of another, there would be no need of reflection. We should grasp and enjoy each thing as it comes along. Wisdom, or as it is called on the ordinary plane, prudence, sound judgment, is the ability to foresee consequences in such a way that we form ends which grow into one another and reinforce one another.³⁴

Therefore, in Dewey's view, one must draw a distinction between what is desired and what is desirable whenever he engages in judging the value of competing objects of desire. To say that the object is desired is to make a statement about a fact, namely, the object is enjoyed, held dear, etc., but to say that the object is desirable is to predict a consequence the object will institute, and consequence here is meant to designate the fact that the object

33. Ibid., p. 201

34. Ibid., p. 228

will unify in a harmonious way one's whole system of desires.

In the second place, Dewey also recognizes that should each individual simply struggle for the satisfaction of his personal desires, the welfare and integrity of the society would be in danger. For this reason, Dewey contends that each individual must develop his "enduring interests in the objects in which all can share."³⁵ This means that whenever we are engaged in judging the value of an object, we must consider whether the object is the object in which all the members of the society can share. Therefore, from Dewey's point of view, the individual must

form an original body of impulsive tendencies into a voluntary self in which desires and affections center in the values which are common; in which interest focusses in objects that contribute to the enrichment of the lives of all.³⁶

It should be clear, on the basis of the above analysis, that the meaning of consequences is different in Dewey's two different moods, that is, the harmonious unification of one's whole system of desires is distinct from the harmonious unification of the desires of the social groups. However, Dewey says that

regard for self and regard for others are both of them secondary phases of a more normal and complete interest: regard for the welfare and integrity of the social groups of which we form a part.³⁷

35. Ibid., p. 335

36. Ibid., p. 336

37. Ibid., p. 332

According to Dewey, then, the value of an object must be judged in terms of the conditions and consequences, and by conditions, he means that the object must be such as to satisfy our desire which arises in an existential situation, and by consequences, he means two different things: first, the object must be an integral part of the objects of desire as a consistent harmonious whole; second, the object must be the object that contributes to the enrichment of the lives of all. In short, Dewey's theory of evaluation contains three different standards of value judgments, namely, the value of an object depends upon (1) whether the object in question is a means for realizing the end imposed by the conditions of the situation — the judgment of a means-end connection; (2) whether the accomplishment of the end will be an integral part of one's whole system of desires — the judgment of a means-consequences connection; (3) whether the accomplishment of the end will contribute to the enrichment of the lives of all — the judgment of a means-consequences connection. It is almost self-evident that these three standards of value judgments are not always compatible with one another. However, it can be pointed out that one of the important aims of education is, for Dewey, to develop the desires and interests of every individual as nearly as possible in harmony with the good of the society.

Although Dewey's three different standards of value judgments

are not always compatible with each other, nevertheless they may be considered as three different modes of possessing value quality. That is to say, value as a universal term designates the definition of value, while its comprehension designates these different modes of possessing value quality. Value must be defined in terms of the conditions and consequences in connection with a problematic situation, but there are three different modes of possessing value quality. In some cases, the value of an object is judged in terms of the connections between the object as a means and the end imposed by the conditions of the situation without explicit reference either to one's whole system of desires or to the welfare of the society; in others, it is judged in terms of one's whole system of desires without explicit reference to the welfare of the society. Nevertheless there are occasions when conscious reference to the welfare of the society is imperative. Under such circumstances, the court of appeal decides by the third standard of value judgments.

CHAPTER IV

DEWEY'S THEORY OF EVALUATION (II)

(v) Moral Judgments

In general, the scope of value judgments is broader than that of moral judgments, for the latter can properly be regarded as a sub-category of the former. Dewey says, "Moral judgments, whatever else they are, are a species of judgments of value."¹ In value judgments we speak of objects as good or bad, but in moral judgments we speak of conduct as right or wrong. We can, however, claim that the person's conduct is good or bad, but we cannot legitimately claim that the object is right or wrong. This is merely one way of showing what Dewey means when he says that moral judgments are a species of judgments of value. While in value judgments, good as an abstract concept is a category of which right is a subcategory, in moral judgments "Right as an idea is an independent moral conception or 'category'..."² When we say that the object A is good in this situation, we are assigning value to A in accordance with our conception of the definition of value. By the same token, when we assert that the man's conduct is right, we are assigning rightness to his conduct in accordance with our conception of the definition of rightness.

1. Ethics, revised edition, p. 290

2. Ibid., p. 247

Dewey holds that just as value judgments take place in connection with a problematic situation, so moral judgments are "to judge the objective situation in order to determine what course of action is required in order that it may be transformed into one that is morally satisfactory and right,..."³ In other words, moral judgments are, for Dewey, intended to bring the problematic moral situation to a satisfactory outcome. In its general features, the trait of a problematic moral situation is that we are in doubt as to what course of action we should take. Dewey says,

A moral situation is one in which judgment and choice are required antecedently to overt action. The practical meaning of the situation — that is to say the action needed to satisfy it — is not self-evident. It has to be searched for. There are conflicting desires and alternative apparent goods. What is needed is to find the right course of action, the right good.⁴

Dewey holds that moral judgments are objective in the sense that they deal with objective problematic situations and that the moral category "right" is defined in terms of the conditions and consequences which are publicly observable. From Dewey's point of view, if the conditions and consequences are publicly observable, it follows that human conduct can be evaluated in an objective way. Dewey advocates that moral judgments must "shift the emphasis to scrutiny of conduct in an objective way, that is with reference

3. Logic: The Theory of Inquiry, p. 168

4. Dewey, John Reconstruction in Philosophy (Boston: The Beacon Press, 1963), p. 163

to its causes and results."⁵ Causes refer to the conditions of the situation which make a person act in a certain way, and results refer to the consequences of the action performed. Therefore, in the final analysis, it can be said that according to Dewey, the moral category of right, like the category of good, must be defined in terms of the conditions and consequences in connection with a problematic moral situation. That is to say, whenever we are passing a moral judgment, we must investigate as closely as possible the conditions of the situation, and we must also consider as widely as possible the consequences of the conduct performed.

As Dewey takes objective conditions and consequences to be the standard of moral judgments, he must be prepared to tell us what he means by these two terms. In Dewey's view, this standard of moral judgments contains three elements. In the first place, Dewey holds that one may act rightly in pursuing his own interest where one cannot determine whether the consequences of one's conduct are actually harming either the welfare of oneself or that of others. Dewey says,

In general, conduct, even on the conscious plane, is judged in terms of the elements of situations without explicit reference either to others or to oneself. The scholar, artist, physician, engineer carries on the great part of his work without consciously asking himself whether his work is going to benefit himself or some one else. He is interested

5. Ethics, p. 279

in the work itself; such objective interest is a condition of mental and moral health.⁶

From Dewey's point of view, in many moral situations, regard for the welfare of the self or that of others is not essential. This does not mean that when we are passing a moral judgment under such circumstances, we need not consider as widely as possible the consequences of our action; it only means that where the consequences of the action are harming neither the welfare of the self nor that of others, or where the consequences of our action are too remote to forecast in connection with their influence on our future conduct or on the welfare of others, the action must be judged in terms of the conditions of concrete situations as they arise. Under such circumstances, one can say that the action is right if it springs from the individual's interest. That is to say, the individual's interest is decisive in determining the rightness of the action.

In the second place, Dewey holds that there are occasions when conscious reference to one's future conduct is essential in moral judgments. This conscious reference is particularly needed when the individual's action may have a considerable influence on his future conduct. In Dewey's view, every act modifies disposition and exercises some influence, negative or positive, on one's future conduct. Dewey says,

6. Ibid., p. 330

Where there is conduct there is not simply a succession of disconnected acts but each thing done carries forward an underlying tendency and intent, conducting, leading up, to further acts and to a final fulfillment or consummation. Moral development, in the training given by others and in the education one secures for oneself, consists in becoming aware that our acts are connected with one another; thereby an ideal of conduct is substituted for the blind and thoughtless performance of isolated acts.⁷

In some cases, whether our act is right or wrong depends on whether it has a positive or negative influence on our future conduct.

Suppose, for example, before we perform the action X, we consider as widely as possible the consequences of X and find that the consequences are not harming the welfare of others. Under such circumstances, whether X is right may depend upon whether its influence upon our future conduct is desirable. If we discover that our performance of X will have an undesirable influence on our future conduct, then X must be judged wrong. Dewey says,

our actions not only lead up to other actions which follow as their effects but they also leave an enduring impress on the one who performs them, strengthening and weakening permanent tendencies to act. This fact is familiar to us in the existence of habit.⁸

Every act, by the principle of habit, has potential moral import, because it necessarily has an influence on the one who performs it. When Dewey discusses the concept of moral responsibility, he

7. Ibid., p. 179

8. Ibid., p. 181

is appealing to the principle of habit. According to Dewey, the possibility of a desirable modification of character is the chief reason for holding a person responsible for his conduct. Dewey advocates that "the practical importance of effecting changes in human character is what makes responsibility important."⁹

In the third place, Dewey maintains that conduct must be judged in terms of its bearing upon the common good. He says, "there are occasions when conscious reference to the welfare of others is imperative."¹⁰ This conscious reference is particularly needed when our action may have a direct and significant influence on our association with others. From Dewey's point of view, it is not necessary that every act performed should be actuated consciously by regard for the welfare of others. However, when our action has an obvious connection with our relationships with others, we must take its social consequences into serious consideration. Dewey says, "Certain traits of character have such an obvious connection with our social relationships that we call them 'moral' in an emphatic sense — truthfulness, honesty, chastity, amiability, etc."¹¹ If the question were asked as to why we should be honest in these circumstances, one of Dewey's answers might be that if we failed to tell the truth in these

9. Ibid., p. 337
 10. Ibid., p. 330
 11. Democracy and Education, p. 415

circumstances, our action would harm others fundamentally.

In brief, according to Dewey, moral judgments are judgments about the conditions and consequences in connection with a problematic situation in which the conduct takes place. This implies that the moral judgment that the action X is right, for instance, contains the following three propositions:

- (1). The action X is a means of realizing the end Y (i.e., the satisfaction of the individual's interest) imposed by the conditions of the situation — the judgment of a means-end connection.
- (2). The consequences that will be produced when the end Y is realized are conducive to the moral development of the self — the judgment of a means-consequences connection.
- (3). The consequences that will be produced when the end Y is realized are conducive to the promotion of the common good — the judgment of a means-consequences connection.

For Dewey, moral judgments are practical judgments, they are practical decisions as to what one should do in a certain moral situation. Men are constantly faced with moral situations in which they are compelled to make practical decisions as to which course of action they ought to take. And it is necessary to state the reasons for the course of action taken. These reasons consist of descriptive sentences determining the connection between the action as a means and the end imposed by the conditions of the situation and estimating the consequences which the course of action, if taken, will produce.

It can be said that according to Dewey, while rightness as

an abstract moral concept designates the definition of the category "rightness", its comprehension designates three different modes of rightness, namely, the satisfaction of one's interest, the moral development of the self, the promotion of the common good. Dewey maintains that to make a moral judgment is to make a decision of what course of action to take. To ask whether we ought to do X in these circumstances is to ask whether or not we have good reasons for performing X, that is, whether we have good reasons for our moral decision. These good reasons are of three kinds:

- (1). X is conducive to the satisfaction of one's interest; therefore, one ought to do X in these circumstances.
- (2). X is conducive to the moral development of the self; therefore, one ought to do X in these circumstances.
- (3). X is conducive to the promotion of the common good; therefore, one ought to do X in these circumstances.

It is interesting to note that the more importance Dewey attaches to the satisfaction of the individual's interest as the standard of moral judgments, the more he is likely to put emphasis on individual freedom, ingenuity, and invention. On the other hand, the more Dewey attaches the importance to the promotion of the common good as the standard, the more he is likely to put emphasis on duty and discipline. However, it must be observed that what Dewey is really anxious to contend is that the satisfaction of the individual's interest and the promotion of the common good are not necessarily in conflict; they could function conjugately

with each other. That is to say, from Dewey's standpoint, our social institutions could be organized in such a way that the promotion of each individual's interest and that of the common good might grow into each other and reinforce each other. This is the ideal of Dewey's moral philosophy.

(vi) Review of Interpretations and Criticisms

According to Morton G. White, Dewey holds that "a is desired now" does not entail "a is desirable," because some things that are now desired may not be desirable. Thus, Dewey draws a distinction between what is desired and what is desirable. White's interpretations and criticisms of Dewey's ethical theory can be briefly stated as follows:

In Dewey's view, the relation between what is desired and what is desirable is identical with the relation between what appears red and what is objectively red. White said

Dewey's view of the relation between what is desirable and what is desired identifies it with the relation which holds between the objective property of being red and the appearance of red.¹²

Just as "a is objectively red" is synonymous with "a appears red under normal conditions", so "a is desirable" is synonymous with "a is desired under normal conditions." However, the difficulty inherent in Dewey's ethical theory is that since "a is objectively

12. White, Morton G. "Value and obligation in Dewey and Lewis" The Philosophical Review, V. LVIII, 1949, 321-329, p. 323

red" is no more normative than "a appears red", it follows that "a is desirable" is no more normative than "a is desired". White said,

I conclude that Dewey has defined "value" and "desirable" in an interesting way, but that he has not succeeded in construing "desirable" in the sense of "ought to be desired," as he thinks he has. I do not see how the statement "a is desired under normal conditions" can be taken as synonymous with "a ought to appear red," but I feel that this consequence is absurd, and hence fatal for Dewey's view.¹³

If "a is desirable" is no more normative than "a is desired", then in what sense can we say that the former is identical with "what ought to be desired" which is a normative statement ? Therefore, Dewey's attempt to give a definition of value in empirical terms has failed. White's point may be summarized as follows:

- (1). "a is desired" is analogous to "a appears red".
- (2). "a is desirable" is analogous to "a is objectively red".
- (3). "a is desirable" is synonymous with "a is desired under normal conditions"; "a is objectively red" is synonymous with "a is red under normal conditions".
- (4). The fact that "a is objectively red" cannot be synonymous with "a ought to appear red" implies that "a is desirable" cannot be synonymous with "a ought to be desired".

There is an ambiguity inherent in the meaning of "normal conditions". When scientists claim that "a is red under normal conditions", the statement may be interpreted as meaning that a is red, if and only if it satisfies the conditions of being red,

13. Ibid., p. 326

i.e., the functional correlation of the radiating-absorptive capacity of rates of vibration combined in a stated proportion. These conditions may, for the sake of simplicity, be termed R. By the same token, when we claim that a is desirable which is synonymous with "a is desired under normal conditions", we may assume our statement to mean that a is desired under D, where D stands for what has been called normal conditions. And when we claim that a ought to be desired, we may assume our statement to mean that a is desired under O, where O stands for certain conditions. Therefore, it may be said that "a is desirable" is synonymous with "a is desired under D", "a ought to be desired" is synonymous with "a is desired under O", "a is objectively red" is synonymous with "a is red under R".

White's statement (4) is invalid for the following reasons: Whether "a is desirable" is synonymous with "a ought to be desired" depends on whether D is synonymous with O, not on whether "a is objectively red" is synonymous with "a ought to be red". It is very odd to say that a ought to appear red, simply because whether a appears red is not an ethical question according to our ordinary conception of ethics. However, by White's own admission, Dewey is using "a is desirable" and "a ought to be desired" as two synonymous statements. Therefore, the crucial issue is whether it can be said that D is synonymous with O. Since Dewey is using "a is desirable" and "a ought to be desired" as two synonymous statements, it follows that in his view, D and O are synonymous with

each other, because they both refer to (1) the promotion of one's interest, (2) the moral development of the self, (3) the promotion of the common good.

Although White's argument (4) against Dewey has been shown to be invalid, nevertheless what White really wants to contend, as will be seen, is that Dewey's attempt to define what ought to be desired in empirical terms has failed. This point deserves our special attention. Because even if White's argument (4) is invalid, his contention that what ought to be desired cannot be defined in empirical terms may still stand, provided a new argument can be presented in support of this contention.

White pointed out that there is another interpretation of Dewey's views according to which what is desired becomes desirable when the causes and consequences associated with it are determined. White held that according to this interpretation, "a desired object becomes desirable just in case we know what causes us to desire it and what consequences ensue from the fact that we desire it."¹⁴ White's particular objection against this view is that since the fact that we know why a looks red to us at this moment does not imply that a is objectively red, it follows that the mere fact that we know what causes us to desire a and what consequences

14. White, Morton G. "Is ethics an empirical science?" in his Social Thought in America (New York: The Viking Press, 1949, 203-219), p. 216

ensue from the fact that we desire it does not imply that a ought to be desired. Suppose we find that a appears red to us and suppose we are able to explain why it appears red to us, we still have no ground to conclude that a is objectively red, because a may appear red to us due to the fact that the light is incorrect or that our vision is not normal. By the same token, suppose we desire a smoke of opium and also know the causes of our desire and the consequences of desiring it, we still have no ground to conclude that we ought to desire a smoke of opium. White said,

Is this smoke of opium, about whose causes and consequences we have the most gruesome information, something we ought to desire ? I suspect that Dewey's words read literally would lead us to say yes for him, but I think that he wants us to conclude when we find out the effects of smoking opium, not that smoking opium is desirable, but rather that it is undesirable.¹⁵

White's point is that even if we know what causes us to desire something and what consequences ensue from the fact that we desire it, we still cannot claim that the thing we desire ought to be desired. This fact implies, in White's view, that Dewey has failed to define "what ought to be desired" in empirical terms. However, the real fact is that nowhere has Dewey explicitly defined good exclusively in empirical terms, namely, nowhere has he actually specified the necessary and sufficient empirical conditions of value. Dewey says,

15. Ibid., p. 217

Formal analogy suggests that we regard our direct and original experience of things liked and enjoyed as only possibilities of values to be achieved; that enjoyment becomes a value when we discover upon which its presence depends. Such a causal and operational definition gives only a conception of a value not a value itself. But the utilization of the conception in action results in an object having secure and significant value.¹⁶

Should Dewey try to define value in empirical terms, White would be right in arguing that Dewey's attempt has failed. If, however, Dewey should try to argue only that statements of what ought to be desired can be analyzed into empirical terms, Dewey would be in the right. For example, it is possible to analyze the value judgment that this is a good car into the following empirical statements: The engine of this car works well, it has new tires, it was painted recently, etc.. We must agree with G. E. Moore that good is indefinable in the sense that it is impossible to specify the necessary and sufficient conditions of goodness in empirical terms. But it does not follow that statements of what ought to be desired cannot be analyzed into empirical statements. However, it must be admitted that Dewey is mistaken in thinking that value judgments are not different from scientific judgments in respect of inquiry and verification and that they can be as objective as scientific judgments. Suppose, for example, we agree with Dewey that the action is right, if it is conducive to the

16. The Quest for Certainty, p. 259

common good, and suppose we also agree with him that the common good can be analyzed into empirical terms, it does not follow that moral judgments are not different from scientific judgments in respect of inquiry and verification, nor does it follow that the former can be as objective as the latter. Because the common good may mean different things to different people. One person may regard some action as conducive to the common good, while another may take a different view, in spite of the fact that they agree with each other with regard to the conditions of the situation in which the action was performed as well as the consequences which the action actually produced. This is not the case with regard to scientific judgments. Scientists have little difficulty in determining, for example, whether a given object is red, simply because red can be defined in empirical terms. Value judgments are more complicated and subjective, because a definition of good in empirical terms is not possible. Therefore, it is important to draw a distinction between the assertion that statements of what ought to be desired can be analyzed into empirical terms and the assertion that what ought to be desired can be defined in empirical terms. Nowhere has Dewey made himself clear that he recognizes or accepts this distinction. When Dewey tells us that good may be defined in terms of the conditions and consequences, his statement gives the impression that in his view, good may be defined in empirical terms. However, when his statement is taken in connec-

tion with his other statements, his position turns out to be that statements of what ought to be desired can be analyzed into empirical statements. In any case, Dewey has never defined good in empirical terms.

With regard to Dewey's ethical theory, some points in Sidney Hook's article may be singled out for consideration in connection with White's interpretations and criticisms of Dewey. In the first place, Hook points out that there is a difference between "a is desirable" and "a is objectively red" which has been overlooked in White's analysis. The difference, according to Hook, is that the statement that a is desirable involves a practical problem of choice, but the statement that a is objectively red does not. Hook says,

The crucial difference, however, overlooked in Professor White's analysis of "desirable" and "objectively red" is that the problematic situation in which we seek to find what is really good or desirable is one that requires a "genuine practical judgment" in answer to the question: What should I do or choose ? whereas the analysis of "seeming red" and "objective red" has been conducted without reference to any practical problem of choice.¹⁷

From White's point of view, if "a is desirable," which is analogous to "a is objectively red," can properly be regarded as a normative statement, it will follow that "a is objectively red" can also

17. Hook, Sidney "The ethical theory of John Dewey" in his The Quest for Being (New York: St. Martin's Press, 1961, 49-70), p. 57

properly be regarded as a normative statement. But he contended that it is absurd for any one to assert "a ought to appear red". However, from Hook's point of view, it is legitimate and far from being absurd for us to regard "a is objectively red" as a normative statement, provided only that it is a genuine practical judgment in answer to the question: What should I do or choose ? Hook said,

it is easy to think of situations in which a man's life may depend upon knowing (in medicine and other practical discipline), what the real or objective property of a substance is. But let him ask: What color of cloth or ornament should I choose for this table ? And at once the actual color of the table, if he wishes to choose wisely, becomes a normative element for his action.¹⁸

Therefore, in Hook's view, "a is objectively red" is normative, if it is a genuine practical judgment in answer to the question: What should I do or choose ? This means that in Hook's view, it is not absurd to assert "a ought to appear red", provided that the statement is a genuine practical judgment in answer to the question: What should I do or choose ? It will be recalled that according to White, "a is desirable" is not synonymous with "a ought to be desired", for if it were, we would have to assert "a ought to appear red" which is absurd. According to White, this constitutes a reductio ad absurdum of the assertion that "a is desirable" is synonymous with "a ought to be desired". What Hook

18. Ibid., p. 58

wished to argue against White is that it is not absurd to assert "a ought to appear red", provided that it is a genuine practical judgment in answer to the question: What should I do or choose ? In other words, Hook agreed with White that if "a is desirable" were synonymous with "a ought to be desired", we would have to assert "a ought to appear red", but he did not think, as White did, that this constitutes a reductio ad absurdum of the assertion that "a is desirable" is synonymous with "a ought to be desired", because in Hook's view, it is not absurd to assert "a ought to appear red", provided that it is a genuine practical judgment in answer to the question: What should I do or choose ? However, it must be observed that Hook immediately pointed out, "It does not mean that the normative scientific statement is an ethical statement, since not all problems of practical choice are ethical."¹⁹ This means that according to Hook, although it is not absurd to assert "a ought to appear red" that is synonymous with "a is objectively red", nevertheless "ought" here is not used as an ethical term. Therefore, it can be said that at the beginning, Hook was arguing against White, but he eventually turned out to be in basic agreement with White. That is to say, White and Hook agreed with each other on one point: It is absurd to assert "a ought to appear red", if "ought" is used as an ethical term.

Let us come to Hook's reaction to White's second criticism

19. Ibid., p. 58

of Dewey. According to White, mere knowledge of the causes and consequences of what is desired does not make the desired desirable. Hook argued that it is true that in addition to our knowledge of the causes and consequences, there are other desirables that have to be taken into account in value judgments. However, Hook pointed out, "These desirables are assumed or postulated as valid because they summarize previous experience... The knowledge that the desired has consequences, which we have reasons to believe desirable, when added to relevant knowledge of the cause of our desire, makes what is desired desirable."²⁰ Suppose, for example, a man is in doubt as to whether he should take a vacation or continue his piece of work, and suppose he discovers that if a vacation is not taken, he will have a mental breakdown. Under these circumstances, the man judges that it is right for him to take a vacation. His judgment is based on the assumption that his health is desirable. According to Hook, health is postulated as desirable in these circumstances, but if the question arises as to why health is desirable, the man must be prepared to give some reasons for thinking that it is desirable. For example, he may contend that if he preserves his health, his children will be happy. Here, the happiness of his children is postulated as desirable. Hook said,

One can keep on asking questions until the inevitable one is reached: "Is life itself worth living?"

20. Ibid., p. 60

But must we really answer that question, too, and an indeterminate number of others, in order to be able to answer the question we started from ? No one can seriously maintain this.²¹

Hook's argument on this point seems right, but the fact that his argument seems right does not imply that White is wrong in asserting that value cannot be defined in empirical terms.

To conclude, according to Dewey, statements of what ought to be desired can be analyzed into empirical statements. White also recognized this point when he told us that Dewey "attempts to reduce statements of what ought to be desired to empirical terms;"²² In fact, White did not present any substantial argument against Dewey on this point. What White really wanted to contend is that value can not be defined in empirical terms. As far as this point is concerned, White is right, though his argument (4) is invalid. On the other hand, Hook maintained that the value of an object can be determined in terms of the conditions of the situation in which it is desired and the consequences that ensue from the fact that we desire it, provided some things are postulated as desirable in that situation. It can be said that these three slightly different positions held by Dewey, White, and Hook respectively are not really in any serious conflict with one another.

21. Ibid., p. 61

22. White, "Is ethics an empirical science ?" p. 219

CHAPTER V

DEWEY'S THEORY OF SCIENCE (I)

Science, according to Dewey, is itself a cultural phenomenon, a product of cultural change and historical growth. It is an extraordinarily successful technique for dealing with many of our problems and is widely accepted as the best our modern culture, through stages of development, has constructed. Science has rapidly grown into an institutionalized habit of thinking and acting. By its techniques and through results obtained by the application of these techniques, it has, in a comparatively short period, revolutionized society. However, in many respects it has also proved itself to be incompatible with older patterns of thought and belief. As we have noted earlier the primary objective of Dewey's philosophy is to bridge the "profound cleavage" arising out of the conflict between pre-scientific habits of thought and action and the new forces generated by science.

Science is central to Dewey's thinking, and he has treated its various aspects at some great length. However, for the purposes of our present inquiry it is not necessary (nor possible) to consider every aspect of what may be called Dewey's 'theory of science'. We have, therefore, selected to discuss, in the present chapter and in the one immediately following, certain essential features of science, its meaning and method, as Dewey understands them. Our discussion is not intended to be conclusive, though it

should throw some light on Dewey's endeavour to relate inquiries to concrete life-situations, and the findings of scientific investigations to value-objects.

Some Characteristics of Science

Science has certain characteristics. According to Dewey one characteristic of science is that it is impersonal. Dewey says, "In truth science is strictly impersonal; a method and a body of knowledge."¹ Science is impersonal in the sense that scientific procedures of observations and testing are capable of being repeated by others, and the validity of scientific propositions is subject to public verification. Dewey says,

It is a truism that science is science because observations, experiments and calculations are so conducted as to be capable of report to others and repetition by others.²

Another characteristic of science is that the aim of science is to "arrive at warranted truths."³ Such truths are free from any specified set of uses, though they can be used as instruments of further inquiry. Dewey says that "science itself is an instrument which is indifferent to the external uses to which it is put."⁴ That is to say, on the one hand, scientific knowledge may be

1. Dewey, John Philosophy and Civilization (New York: Capricorn Books, 1963), p. 319

2. Ibid., p. 89

3. Problems of Men, p. 165

4. Philosophy and Civilization, p. 320

pursued for its own sake, while on the other hand, it can be used as intellectual instrumentalities of inquiry. When scientific knowledge is pursued for its own sake, the scientist is "concerned with the advancement of knowing apart from concern with other practical affairs."⁵ This type of activity is termed "the ideal of scientific knowing."⁶

The scientist, in pursuing the actual course of scientific knowing, is concerned with the attainment of truth for its own sake. Scientific knowledge in this sense and truth are, in Dewey's view, two names for the same thing. As he says,

Truth is a collection of truths; and these constituent truths are in the keeping of the best available methods of inquiry and testing as to matters-of-fact; methods, which are, when collected under a single name, science.⁷

Dewey also distinguishes the logic of science from traditional formal logic. In his view, traditional formal logic is primarily concerned with non-contradiction or self-consistency of premises, and as such it is "the Logic of argument, not of truth;"⁸ The logic of science, on the other hand, is "an attempt to take account of the methods the aim of which is truth, and which deal with a material of fact."⁹ Thus, the traditional formal logic is

5. Dewey, John & Arthur F. Bentley Knowing and the Known, (Boston: The Beacon Press, 1949), p. 282

6. Ibid., p. 283

7. Experience and Nature, p. 410

8. Dewey, John "Is logic a dualistic science ?" The Open Court, 16 Jan. 1890, III, 2040-2043, p. 2040

9. Ibid., p. 2040

seen as the logic of argument while the logic of science as the logic of truth.

Another characteristic of science is that its aim is to establish laws for the control of events by discovering the relations or connections of things. Dewey says, "The aim of science is law."¹⁰ He also points out that "Modern experimental science is an art of control."¹¹ The aim of science, then, is to establish law for the control of events; and the law can be established by discovering the relations or connections of things. In Dewey's view, "Science does not concern itself with the individualities of things. It is concerned with their relations."¹² In science, things are arranged in terms of the regular and stable order of connections, so that their antecedents and consequences can be seen as connected. Dewey says, "the knowledge of the relations between changes which enable us to connect things as antecedents and consequences is science."¹³

The Meaning of Science

Dewey holds that the genuine meaning of science can be understood only when its three essential elements are grasped. These three essential elements consist of scientific attitude, scienti-

10. Problems of Men, p. 217

11. The Quest for Certainty, p. 100

12. Philosophy and Civilization, p. 293

13. The Quest for Certainty, p. 274

fic subject-matter, and scientific method. Dewey says,

With respect to the question as to the meaning of science, a distinction needs to be made between science as attitude and method and science as a body of subject-matter.¹⁴

(1). Scientific attitude: — According to Dewey, science as attitude designates a distinctive type of disposition. He says,

Extension of the qualities that make up the scientific attitude is quite a different matter than dissemination of the results of physics, chemistry, biology and astronomy, valuable as the latter may be.¹⁵

Science as attitude, in distinction from science as subject-matter, designates a distinctive type of disposition which is characterized by certain features. Scientific attitude means freedom from the control of prejudice, custom and emotion. Dewey says,

It is individual persons who need to have this attitude substituted for pride and prejudice, for belief made dear by custom and early emotional associations.¹⁶

Scientific attitude also implies that one is capable of distinguishing a genuine problem from an artificial one. Dewey says that the scientific attitude is "rooted in the problems that are set and questions that are raised by the conditions of actuality."¹⁷

From Dewey's point of view, there is a distinction between genuine

14. Dewey, John "Unity of science as a social problem" (In International Encyclopedia of Unified Science, Vol. I, No. I, 29-38), p. 29

15. Freedom and Culture, p. 153

16. Ibid., p. 151

17. "Unity of science as a social problem." p. 31

and artificial problems. The genuine problem is a problem which grows out of the conditions of human life; the artificial problem is a problem which does not grow out of the actual conditions under which life is carried on. Thus,

Any problem of scientific inquiry that does not grow out of actual (or "practical") social conditions is factitious; it is arbitrarily set by the inquirer instead of being objectively produced and controlled.¹⁸

A problem is genuine when it grows out of the actual empirical situation, namely, the situation of "active contact with things and persons."¹⁹ On the other hand, "all problems are artificial which do not grow, even if indirectly, out of the conditions under which life, including associated living, is carried on."²⁰ By genuine problems, Dewey means such problems as how to start a car, how to build a house, how to undertake social reform, how to achieve peace, and the like; and by artificial problems, he possibly means such problems as the absolute character of the absolute good, the possibility of attaining knowledge of eternal Reality or what the contemporary logical positivists would call "metaphysical problems." Dewey writes,

The existence of artificial problems is also undeniable fact in human history... in the sense that "metaphysical" means that which is outside of experience, over and beyond it, all human beings are meta-

18. Logic: The Theory of Inquiry, p. 499

19. Democracy and Education, p. 183

20. "Unity of science as a social problem," p. 31

physical when they occupy themselves with problems which do not rise out of experience and for which solutions are sought outside experience. Men are metaphysical not only in technical philosophy but in many of their beliefs and habits of thought in religion, morals, and politics.²¹

In Dewey's view, if the material of inquiry is not a genuine problem, it is "scientifically 'dead'," and the inquiry is "hardly more than a form of intellectual busy work."²²

Another feature which characterizes the distinctive type of disposition designated by the scientific attitude is the will to employ the method of science to reach beliefs and to test those that are entertained. When speaking of the scientific attitude, Dewey says,

Positively, it is the will to inquire, to examine, to discriminate, to draw conclusions only on the basis of evidence. It is the intention to reach beliefs, and to test those that are entertained on the basis of observed fact, recognizing also that facts are without meaning save they point to ideas. It is, in turn, the experimental attitude which recognizes that while ideas are necessary to deal with facts, yet they are working hypotheses to be tested by the consequences they produce.²³

This seems to be the quality of mind embodied in habitual will to employ the scientific method of observation, formulating hypotheses, and verification in all areas of human life, including religion, morals, education, and politics.

21. Ibid., pp. 31-2

22. Logic: The Theory of Inquiry, p. 499

23. "Unity of science as a social problem," p. 31

(2). Scientific subject-matter: — Dewey holds that the subject-matter of science is either conceptual or existential. Science as "conceptual subject-matter"²⁴ contains a series of universal propositions which consists of "a system of related conceptions (stated propositionally)".²⁵ Science as "existential subject-matter"²⁶ contains a set of existential propositions systematically organized. The subject-matter is scientific only when it is systematically organized so as to promote the easy passage of propositions from one to another. That is to say, the scientific subject-matter is propositionally arranged in such a way that one proposition is a conclusion from another proposition, while in turn it serves as a premise from which still another proposition may be derived. Dewey says,

In any given science... we may test any given proposition by noting whether and how it follows from other propositions taken as established, and also may utilize given propositions to arrive at others not previously known.²⁷

In science, we may test any universal proposition by noting whether and how it follows from other universal propositions already established, and we may utilize it to arrive at still other universal propositions not previously known. By the same token, we may test

24. Logic: The Theory of Inquiry, p. 467

25. Ibid., p. 466

26. Ibid., p. 470

27. Dewey, John "Scientific method" (in A Cyclopedia of Education, Vol. V), p. 292

any existential proposition by noting whether and how it is inferred from other existential propositions already established, and we may utilize it to arrive at still other existential propositions not previously known. Therefore, scientific propositions have their own independent, indefinite, developing career. In this sense, the subject-matter of science is systematized for its own sake. Dewey says,

Science is knowledge systematized from the standpoint of and for the sake of knowledge, as distinct from the standpoint of practice and social intercourse.²⁸

Dewey holds that each branch of science, physics, chemistry, geology, etc., aims at establishing its own specialized set or series of propositions which are so closely connected that any one implies or involves some other, and such propositions are established for the sake of knowledge.

It has been stated previously that the aim of science is law. Dewey points out that there is a double meaning of "law". A law may be either a universal proposition or an existential proposition. Dewey writes,

We append, however, some comments upon the double meaning of the word law. It is employed to designate the content of physical generalizations both when (1) a specified conjunction of traits has been observed and confirmed without an exception being found, and (2) when the relation in question is itself a member of a system of interrelated uni-

28. Ibid., p. 292

versal propositions... There is no objection to the double use of the word "law". But the use should not be allowed to disguise the fact that law in one case is existential in reference, while in the other it is definitely non-existential in reference.²⁹

For example, the following laws are existential propositions:

"tin melts at the temperature of 232 c."³⁰; "Taking arsenic into the system under certain conditions tends to produce death."³¹

On the other hand, the Newtonian law of gravitation and the Einsteinian law of relativity are universal propositions.

(3). Scientific method: — Dewey maintains that a scientific subject-matter is science because of the method with which it has been systematized. For this reason, he says that "in the order both of time and of importance, science as method precedes science as subject-matter."³² However, Dewey also notices that the phrase "scientific method" has a wide range. When the term is restricted to disciplines in which exact mathematical procedures can be performed, only physics and chemistry are qualified as sciences, while biology, psychology, and social subjects are to be excluded. In view of this fact, Dewey says,

Clearly we must take the idea of science with some latitude. We must take it with sufficient looseness to include all the subjects that are usually regarded

29. Logic: The Theory of Inquiry, pp. 354-5

30. Ibid., p. 354

31. Ibid., p. 452

32. Characters and Events, Vol. II, p. 771

as sciences.³³

According to Dewey, science as method has two sides. On its logical side, it means "the method of intelligence in experimental action."³⁴ The scientific method in this logical sense must be continuously explored, and its realization can only be approximated, not completely effected. Dewey says, "The scientific method neither presupposes nor implies any set, rigid, theoretical position."³⁵ He further points out, "The developmental process in 'science' is still far from complete."³⁶ On its existential side, the scientific method is "a trial of ideas".³⁷ Ideas are anticipated consequences of what will happen when certain operations are executed; a trial of ideas means to determine the truth of ideas in terms of the consequences they actually produce. The scientific method in this existential sense refers to the best method of intelligence in every field of inquiry which has been achieved up to date. Dewey says that the scientific method is "the sole universal method of dealing intellectually with all problems."³⁸

It has been noted previously that, in Dewey's view, scientific

33. Dewey, John The Sources of a Science of Education, (New York: Horace Liveright, 1929), p. 8

34. Problems of Men, p. 169

35. Knowing and the Known, p. v

36. Ibid., p. 163

37. Democracy and Education, p. 394

38. "Unity of science as a social problem", p. 37

method must be taken with some latitude, so that it may include the method employed in all the subjects that are usually regarded as sciences. When scientific method is taken in this broad sense, it has three essential aspects.

First of all, scientific method designates methods of observation, reflection, testing, and the hypothetical status of all beliefs. Dewey says,

By science is meant... that knowledge which is the outcome of methods of observation, reflection, and testing which are deliberately adopted to secure a settled, assured subject matter.³⁹

The existence of scientific method is a result of the regulation of the conditions under which empirical observation takes place. A scientist must be on the lookout against possible errors arising from his personal prejudices, habits or emotional associations by adopting the instrumentalities of observation which enable him to give a purely objective rendering of the data to be interpreted. On the other hand, scientific method also designates a method of reflection. Dewey says,

Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends, constitute reflective thought.⁴⁰

The method of reflection means that we have no good reason to

39. Democracy and Education, p. 256

40. Dewey, John How We Think, (Boston: D. C. Heath and Co., 1910), first edition, p. 6

entertain any belief or to call anything warranted belief except in the light of the grounds that support it and the consequences which agree with and confirm the belief in question. The grounds that support the belief are based on observation, while the consequences are determined by experiment conducted in accord with the requirements of that belief. Dewey says,

As I see the matter, what marks the scientific movement that began a few centuries ago and that has accomplished a veritable revolution in the methods and conclusions of natural science are its experimental conduct and the fact that even the best established theories retain hypothetical status.⁴¹

Secondly, scientific method means the method of making use of universal and existential propositions. In Dewey's view, universal and existential propositions are indispensable to scientific method. Dewey says,

while scientific method is not possible without non-existential if-then propositions, and while such propositions are necessary conditions of scientific method, they are not its sufficient conditions.⁴²

Scientific method must make use of both universal and existential propositions. Universal propositions are non-existential in reference, while existential propositions are propositions about matters-of-fact. The conjugate operation of universal propositions, functioning as procedural means, and existential propositions,

41. John Dewey On Experience, Nature, and Freedom, pp. 147-8

42. Logic: The Theory of Inquiry, p. 381

functioning as material means, constitutes the essence of scientific method.

The third essential aspect of scientific method is that it includes the processes of induction and deduction. Dewey says,

Any account of scientific method must be capable of offering a coherent doctrine of the nature of induction and deduction and of their relations to one another, and the doctrine must accord with what takes place in actual scientific practices.⁴³

As a matter of fact, Dewey uses induction and deduction in, at least, two different senses. In the first place, Dewey holds that deduction means the movement from one universal proposition to another universal proposition, and induction means the movement from one existential proposition to another existential proposition. In this sense, deduction is identical with reasoning or discourse, and induction is identical with inference. Dewey says,

Deduction deals directly with meanings in their relations to one another, rather than with meanings directly referred to existence. But these meanings are what they are in themselves and are related to one another by means of acts of taking and manipulating — an art of discourse.⁴⁴

Therefore, it can be said that all three types of reasoning in Dewey's logical theory may be termed deduction, namely, first, the movement from a universal term to another universal term; second, the movement from a universal term to a universal proposi-

43. Ibid., p. 419

44. Experience and Nature, p. 380

tion; third, the movement from one universal proposition to another universal proposition. On the other hand, all three types of inference may be termed induction, namely, first, the movement from an existential term to another existential term; second, the movement from an existential term to an existential proposition; third, the movement from one existential proposition to another existential proposition. Dewey says,

The progress made by inquiry in any branch may, then, be measured by the extent to which it has succeeded in developing methods of inquiry that, at one and the same time, provide material data having conjunct inferential and testing force. Satisfaction of this condition provides the definition of inductive procedures.⁴⁵

What Dewey is actually saying is that any existential term and proposition must carry inferential force so that from which other existential terms and propositions may be inferred.

If, however, deduction and induction are identical with reasoning and inference respectively, it seems repetitious for Dewey to employ them, inasmuch as he has already used inference and reasoning. However, Dewey also uses deduction and induction in the second sense, and it is induction and deduction in the second sense which form the main interest of his theory in this respect. According to Dewey, a movement from facts to meanings is inductive; while a movement from meanings to facts is deductive. Dewey says,

45. Logic: The Theory of Inquiry, p. 429

The idea is accepted as a working hypothesis, as something to guide investigation and bring to light new facts, not as a final conclusion. When pains are taken to make each aspect of the movement as accurate as possible, the movement toward building up the idea is known as inductive discovery (induction, for short); the movement toward developing, applying, and testing, as deductive proof (deduction, for short).⁴⁶

In Dewey's theory, the term "idea" could have, at least, two meanings. It may be a universal term or a universal proposition. Thus, we may interpret Dewey as holding the view that the movement from universal terms or propositions toward instituting existential terms or propositions is deduction; the movement from existential terms or propositions toward instituting universal terms or propositions is induction. Dewey says,

But the movement of inference cannot be identified with that of rational discourse without radical doctrinal confusion. Nor can either one of the two logical movements be identified with the application of the universal proposition to existential material.⁴⁷

In short, for the sake of clarity, we may assume Dewey to hold only the second sense of induction and deduction. Therefore, we may say that, according to Dewey, the movement from one existential term or proposition toward instituting another existential term or proposition is inference; the movement from one universal term or proposition toward instituting another universal term or proposition is reasoning; the movement from an existential term

46. How We Think, first edition, p. 81

47. Logic: The Theory of Inquiry, p. 277

or proposition toward instituting a universal term or proposition is induction; the movement from a universal term or proposition toward instituting an existential term or proposition is deduction. Dewey holds that the movements of induction and deduction are complementary because

induction terminates in the universal with which deduction sets out, while the validity and scope of the universal is determined by its application, under test conditions, to new facts — this application being deduction.⁴⁸

Thus, inference, reasoning, induction, and deduction, have a unique and independent function in Dewey's concept of scientific method.

48. Dewey, John "Induction and Deduction", (in A Cyclopedia of Education, Vol. III, New York: The Macmillan Company, 1912, 422-424), p. 422

CHAPTER VI

DEWEY'S THEORY OF SCIENCE (II)

Scientific Method and its Relevance to Life

Dewey holds that natural science is forced by its own development to abandon the assumption that there are fixed substances or that things have permanent intrinsic properties. Dewey says,

natural science is forced by its own development to abandon the assumption of fixity and to recognize that what for it is actually "universal" is process;¹

For Dewey, the development of science is the development of the control of processes which are characterized by changes. Therefore, the method of natural science can dispense with any assumption of the existence of unchangeable substances. Dewey says,

Till our own day, scientific conceptions were interpreted in the light of the old belief that conceptions to be valid must correspond to antecedent intrinsic properties resident in objects dealt with.²

From Dewey's point of view, the object of natural science is connected with that of common sense, because the former takes its departure from the latter. What we call water is termed H₂O in chemistry, but water and H₂O are, in fact, two names for the same thing. The objects of common sense are things of crude or macroscopic experience, such as water, house, the sun, earth, plants, etc., they are qualitative objects or objects of the common sense

1. Reconstruction in Philosophy, p. xiii

2. The Quest for Certainty, p. 126

world of concrete enjoyments and sufferings. Dewey himself describes this point quite accurately when he tells us, "Immediate empiricism postulates that things — anything, everything, in the ordinary or non-technical use of the term 'thing' — are what they are experienced as."³ We must not, however, press Dewey's statement too far. For example, we must not interpret him as saying that if a horse is experienced by some people as a cow, the horse must be a cow. Dewey's statement is meant to assert merely that what we normally call a horse is really a horse according to the ordinary or non-technical use of the term "horse". In this sense, the objects of common sense are what they are experienced as. Water, house, the sun, earth, are what they are experienced as. So far as this point is concerned, Dewey's statement presents no serious ambiguity of any kind.

According to Dewey, the objects of science are constructed on the basis of the objects of common sense, the former are termed "the secondary objects" while the latter are termed "the primary objects."⁴ In Dewey's view, nature is experienced in terms of the primary objects, such as stones, people, books, and so on. But in science, the primary objects are transformed into the secondary objects. If nature is taken to refer to things of the common sense

3. Dewey, John The Influence of Darwin on Philosophy and Other Essays in Contemporary Thought (New York: Henry and Co., 1910), p. 227

experience with which the objects of science are connected, then it follows that there is a union of common sense and science, and it also follows that science is closely connected with nature, when nature is taken to refer to the primary objects of common sense. Therefore, Dewey has avoided the question as to whether the intrinsic or unchanging properties of things exist. From Dewey's point of view, science takes its departure from nature as it is experienced in the common sense world, and then proceeds to construct its secondary objects as the objects of knowledge. The question with regard to the existence of the intrinsic or unchanging properties of things simply does not arise, or if it does arise, it is quite irrelevant to the actual practice of natural science. Dewey says,

There are no conceivable ways in which the existence of ultimate unchangeable substances which interact without undergoing change in themselves can be reached by means of experimental operations. Hence they have no empirical, no experimental standing; they are pure dialectic inventions.⁵

However, when the scientist constructs the secondary objects as the objects of knowledge out of the primary objects, he tends to confer upon the latter traits which were not previously experienced in the common sense world. Dewey says,

Knowledge or science, as a work of art, like any other work of art, confers upon things traits and

4. Experience and Nature, p. 5

5. The Quest for Certainty, p. 118

potentialities which did not previously belong to them.⁶

In order to confer upon the primary objects traits which were not previously experienced in the common sense world, the scientist must undertake two things. In the first place, he must actually observe the primary objects as they are experienced in the common sense world. For example, an astronomer must actually observe the sun, earth, moon and the stars of every-day life. Therefore, the scientist must depend upon his sense experience and practical observation. In the second place, the scientist must also use his head, so to speak, to formulate new schemes and organizations which he is to confer upon the primary objects of common sense. The scientist must depend upon his own creative imagination in this respect. Dewey says,

For all experiment involves regulated activity, directed by ideas, by thought. And in the present state of, say, physics, highly elaborate, intricate schemes of thought are here involved, beyond the reach of sense or of any form of observation. Therefore it would seem that those ideas which function as theories and hypotheses in scientific experimentation and organization are not copies of sensations nor suggested by past experience, by past observation, but that they have a free, imaginative quality that no direct sensation or observation can have.⁷

Therefore, according to Dewey, what a scientist needs in order to construct the secondary objects as the objects of knowledge is

6. Experience and Nature, p. 381

7. John Dewey On Experience, Nature, and Freedom, pp. 85-6

sense experience plus a free, imaginative quality of mind. A scientist must observe water as experienced in the common sense world, and he must also invent the symbols H_2O to confer upon water, so that the latter is transformed into H_2O . The scientist observes something which is called water by the common people, but he proceeds to create the symbols H_2O to confer upon water. This new trait of water is created by the free, imaginative quality of his mind.

According to Dewey, transformation of the primary objects which are objects of common sense into the secondary objects of science is effected through substitutions. Dewey says,

The possibility of regulating the occurrence of any event depends upon the possibility of instituting substitutions. By means of the latter, a thing which is within grasp is used to stand for another thing which is not immediately had, or which is beyond control. The technique of equations and other functions characteristic of modern science is, taken generically, a method of thoroughgoing substitutions.⁸

For example, when the primary objects like red and blue are transformed into the secondary objects of science through substitutions, they are denoted by rates of vibration. This means that the primary objects are qualitatively distinctive, namely, the red objects are qualitatively distinguishable from the blue objects. But the secondary objects like red and blue are "defined as the functional correlation of the radiating-absorptive capacity of these vibra-

8. Experience and Nature, p. 142

tions combined in a stated proportion."⁹ When the primary objects of common sense are transformed into the secondary objects of science, the qualitative objects become quantitative in character with the consequence that the qualitatively heterogeneous world of common sense becomes a quantitatively homogeneous world of science. The secondary objects of science are homogeneous, because they can be stated in terms of spatial-temporal orders and be subjected to equations. Dewey says,

The inevitable consequence is the subjection of individuals or unique modes of variation to external relations, to laws of uniformity; that is to say, the elimination of individuality.¹⁰

In other words, transformation of the primary objects of common sense into the secondary objects of science means the elimination of individuality of the former. The main function of such elimination is to liberate the primary objects from all ulterior human use and enjoyments, and finally to construct laws of uniformity for control. Dewey says,

In physical science, the abstraction or liberation is complete. Things are defined by means of symbols that convey only their consequences with respect to one another.¹¹

When things are defined by means of symbols and are connected with one another in terms of their consequences, the establishment

9. Logic: The Theory of Inquiry, p. 258

10. Experience and Nature, p. 146

11. Ibid., p. 193

of physical laws becomes possible. This is the reason that Dewey advocates that the aim of science is law. Take, for instance, the case of water stated as H_2O . Taken as the primary object of common sense, water has familiar bearings and uses in human life. But when water is stated as H_2O , it becomes abstract and separated from such bearings and uses, and, moreover, it is linked with other symbols in a system so that transition and equation are possible. That is, oxygen and hydrogen which are symbolized by H_2O are connected with other chemical elements in the scientific system of chemistry. Dewey says,

Starting from the elements and the relation defined in H_2O one can, so to speak, travel through all the whole scope and range of complex and varied phenomena.¹²

According to Dewey, there are two distinctions between common sense and scientific inquiries. In the first place, the distinction between common sense inquiries and scientific inquiries is that the former are "concerned with qualitative matter" while the latter are "dependent upon elimination of the qualitative as such and upon reduction to non-qualitative formulation."¹³ Since the secondary objects of science are stated in terms of mathematical relations which are non-qualitative, they are more accurate and are subject to public observation and test. But this is not the case with the primary objects of common sense. Dewey says,

12. The Quest for Certainty, p. 158

13. Logic: The Theory of Inquiry, p. 65

This is only an elaborate way of saying what scientific inquiry has made clear, that, for purposes of inference as to conditions of production of what is present, ordinary sense perception is too narrow, too confused,...¹⁴

The remedy is the transformation of the primary objects into the secondary ones which are, as Dewey puts,

logical primitives — that is, irreducible for purposes of inference. They are simply the most unambiguous and best defined objects of perception which can be secured to serve as signs.¹⁵

The second distinction between common sense and scientific inquiries is that the former are conducted for the sake of settlement of some issue of practical use and enjoyment, while the latter may be conducted for their own sake. For example, a farmer may be very anxious to know whether it will rain tomorrow, because he has to till his land or to make an important decision. In that case, his inquiry is practical. But a scientist may wish to know how to predict the weather of the next week by determining the height of the mercury column, variations of atmospheric pressure, and the amount of moisture in the air, even if there is no practical necessity for him to do so. In this sense, his inquiry is conducted for its own sake. Dewey says,

The attainment of knowledge of some things is necessarily involved in common sense inquiries, but it occurs for the sake of settlement of some issue of use and enjoyment, and not, as in scientific inquiry,

14. Essays in Experimental Logic, p. 402

15. Ibid., p. 404

for its own sake. In the latter, there is no direct involvement of human beings in the immediate environment — a fact which carries with it the ground of distinguishing the theoretical from the practical.¹⁶

Common sense inquiries are conducted for some practical purposes while scientific inquiries may be conducted for their own sake. Since common sense inquiries are concerned with practical problems of use and enjoyment, they are "inherently teleological."¹⁷ On the other hand, when scientific inquiries are conducted for their own sake, they are "concerned with the advancement of knowing apart from concern with other practical affairs."¹⁸

We have already noted that the subject-matter of scientific inquiries grows out of the subject-matter of common sense inquiries. The secondary objects of science are constructed on the basis of the primary objects of common sense. Dewey says,

That the subject-matter of primary experience sets the problems and furnishes the first data of the reflection which constructs the secondary objects is evident; it is also obvious that test and verification of the latter is secured only by return to things of crude or macroscopic experience — the sun, earth, plants and animals of common, every-day life.¹⁹

For example, the secondary object known as H₂O would not come into existence apart from the existence of the primary object known as water. This is precisely what Dewey means when he tells

16. Logic: The Theory of Inquiry, pp. 60-1

17. Ibid., p. 76

18. Knowing and the Known, p. 282

19. Experience and Nature, pp. 4-5

us that the subject-matter of scientific inquiries grows out of that of common sense inquiries.

However, when Dewey tells us as in the passage quoted in the preceding paragraph that test and verification of the secondary objects of scientific inquiries are secured only by return to the primary objects of common sense inquiries, he could be implying two quite different things. In the first place, Dewey could imply that verification of the scientific theory can be secured only by return to the experience of common sense. Suppose, for example, a man is ill, so his doctor institutes a problem for investigation and sets up a hypothesis to be tested. Dewey's statement in question could mean to imply that the verification of the physician's hypothesis can only be secured by return to the physical conditions of his patient such that the physical conditions of the patient must be determined by the experience of common sense, not by the physician using his scientific instruments to detect physical occurrences of the patient which are beyond the reach of the ordinary experience of common sense. Should this be what Dewey's statement implies when he says that verification of a scientific theory can only be secured by return to the experience of common sense, he would create a great deal of confusion which could be fatal to his entire philosophical system. Because in that case, Dewey would be holding the view that the verification in scientific inquiries must take place within the

framework of common sense inquiries, and this is the view which no scientist would accept. It must be readily admitted, however, that the conclusion of scientific inquiries must normally be consistent with the experience of common sense. For example, when the physician announces that his hypothesis with regard to the illness of his patient has been verified, the result of his professional treatment of the patient must be consistent with the experience of common sense. That is to say, when the patient is declared by the physician to be cured, the patient must get well from the common sense standpoint. From the scientific point of view, the statement that the patient is cured means that his physical occurrences satisfy the conditions specified by the physician's hypothesis. On the other hand, from the common sense point of view, the statement that the patient is well means a variety of different things, such as the patient looks healthy, can walk, eat, etc., which are too ambiguous to be the criterion of the verification of the scientific theory.

In the second place, when Dewey tells us that verification of a scientific theory must be secured by return to the experience of common sense, he could be using the term "verification" in a very loose sense, and what he really wanted to assert could be that the conclusions of scientific inquiries must react into the experience of common sense in a way that affects and enriches the latter. Dewey says "The special results of science are always

finding their way back into the natural and social environment of daily life and modifying it."²⁰ At the outset, for example, the common sense view may hold that since one thing comes after another, it comes because of the other. But the special results of scientific inquiries may show that this is not always the case, and thus, refine and modify the view held by the plain man. This is why Dewey advocates that the subject-matter of scientific inquiries must react into that of common sense "in a way that enormously refines, expands and liberates the contents and the agencies at the disposal of common sense."²¹

Therefore, in Dewey's view, science never loses its instrumental character, the practice of science is always intended to refine common sense. The scientist transforms the primary objects of common sense into the secondary objects of science with a view to understanding and controlling the primary objects of common sense. For example, water as the primary object is transformed into the secondary object H_2O , because we can only understand and control the former in terms of the latter in the most economical and effective manner. Water still has the meanings of water of the common sense experience when it is symbolized by H_2O , but in doing so, we are in a better position to understand and control water of the common sense experience. This is the reason that when

20. The Quest for Certainty, p. 199

21. Logic: The Theory of Inquiry, p. 66

speaking of the role of the secondary objects of science, Dewey advocates,

They explain the primary objects, they enable us to grasp them with understanding, instead of just having sense-contact with them.²²

To put the same thing in a different way. The primary objects are objects of everyday experience, such as stones, houses, tables, plants, animals, diseases, health, and so on; they are concretely experienced, liked or disliked, loved or hated, and that is all. But the secondary objects of science are "the products of analysis."²³ They are instituted to effect the primary objects no matter whether the latter are value-objects or objects of direct sense experience. This is why Dewey declares that the objects of science "serve as tools to effect immediate havings and beings."²⁴

This, in brief, is the philosophic base of Dewey's conception of the method of science. The conception can be seen as related to the goal of inquiry and the purpose of evaluation. The need for inquiry arises, as we have seen, in the face of conflicts among our various beliefs, conflicts which can be resolved only by scientific inquiry. Similarly, the need for evaluation arises in the presence of problematic value situations in the "primary objects" of direct experience. The "secondary objects" of science, which

22. Experience and Nature, p. 5

23. Ibid., p. 144

24. Ibid., p. 136

are "the products of analysis", are instruments¹; they are used in the effort to grasp those primary objects. Inquiry, whether it is concerned with knowing or with evaluation in a more practical situation, is the method of converting an indeterminate situation into a determinate one. The special results of science must, therefore, in Dewey's view, enter into the original situation which in the first place gave rise to the problem. Science is thus instrumental, and as Dewey sees it, scientific inquiry can affect and modify every aspect of human life including our moral and social life.

CHAPTER VII

DEWEY'S CONCEPTION OF DEMOCRACY

In his social philosophy Dewey is primarily concerned with the search for conditions under which a society may become a truly democratic community. He asks,

What are the conditions under which it is possible for the Great Society to approach more closely and vitally the status of a Great Community, and thus take form in genuinely democratic societies and state ?¹

In Dewey's view, in physical inquiry, man has built a store of scientific knowledge, but in social matters man's knowledge is still in a pre-scientific and pre-technological stage. Dewey argues that if the society is to become a truly democratic community, the prime condition is to achieve a scientific understanding of social phenomena with a view to building a store of scientific knowledge in social inquiry. Dewey advocates, "The prime condition of a democratically organized public is a kind of knowledge and insight which does not yet exist."² The kind of knowledge that is required in constructing a truly democratic community must necessarily be scientific, because, the knowledge that is exemplified in natural science has proved most effective in dealing with physical phenomena, and, from Dewey's standpoint, natural scientists have worked out a method of inquiry so effective as to provide the working

1. Dewey, John The Public and Its Problems (Denver: Alan Swallow, 1927), p. 157

2. Ibid., p. 166

model for social inquiry. This is why Dewey says that the method of the natural sciences should serve "as the model for the sciences involving human practice, or the social and moral disciplines."³ Now, if a truly democratic society is to come into being, we need a store of scientific knowledge about social phenomena; but certain conditions must be fulfilled before any such scientific knowledge about social phenomena can be obtained for practical use. What are these conditions ? Dewey's answer is that the conditions that must be fulfilled are the conditions exemplified in his conception of democracy, political as well as social.

Democracy, for Dewey, is a word of many meanings; only one of its meanings is distinctly political. Dewey holds that political democracy denotes universal suffrage, recurring elections, majority rule, and so on. However, in Dewey's view, the political phase of democracy is "not the most inspiring meaning of the different meanings of democracy"⁴ and that the essential meaning of democracy consists in its social phase. Hence there is a distinction between "democracy as a social idea and political democracy as a system of government. The two are, of course, connected."⁵ In Dewey's view, again, political democracy is primarily a means for realizing democracy as a social idea. What is democracy as a social

3. Problems of Men, p. 200

4. The Public and Its Problems, p. 82

5. Ibid., p. 143

idea ? To this question, Dewey's answer is that democracy as a social idea is a way of life that may be expressed in terms of the formula of liberty, equality and fraternity. This is why Dewey says that democracy may be linked up with "the formula of liberty, equality and fraternity."⁶ Therefore, the meaning of democracy as a social idea can be understood in terms of the meaning of liberty, equality and fraternity.

The idea of liberty in a democratic society is the liberation of individuals so that they may, each in his own way, contribute their intelligence to all fields of inquiry. That is to say, whenever an individual is confronted with a problematic situation, he needs to conduct an efficient inquiry in order to search for the right course of action for the resolution of the situation. Dewey says, "This inquiry is intelligence."⁷ It can be said that, for Dewey, the ability to perform the efficient conduct of inquiry constitutes the essential meaning of intelligence. In fact, Dewey has made this point quite explicit when he says,

I am pretty well used to having my writings on value, and on social topics generally, criticized as based upon an extremely exaggerated view of intelligence — that word being, in my use of it, a short name for competent inquiry at work.⁸

An individual is intelligent by virtue of his capacity to conduct

6. Characters and Events, Vol. II, p. 850

7. Reconstruction in Philosophy, p. 164

8. Problems of Men, p. 330

inquiry. And, Dewey's conception of freedom is closely related to the conception of intelligence. Freedom for Dewey is freedom of intelligence. Dewey says, "The individual inquirer has not only the right but the duty to criticize the ideas, theories and 'laws' that are current in science."⁹ But, the conclusions the individual arrives at, and the method he uses must be "public" and "open", e.g., they must be based on the recognition of the "collective authority" of organized intelligence. Therefore, freedom, for Dewey, is not the right for each individual to act as he pleases; the basic freedom in a democratic society is the freedom of intelligence. Dewey says that "the basic freedom is that of freedom of mind and of whatever degree of freedom of action and experience is necessary to produce freedom of intelligence."¹⁰ Freedom of intelligence is the freedom of individuals that is intended to attain organized intelligence which is the source of authority.

Since by freedom Dewey means freedom of intelligence, in his theory, freedom and authority go hand in hand. The statement that each individual is free in this sense means that he is entitled to invent his own method of inquiry for the pursuit of knowledge. But whether the method of inquiry he invents is an effective one

9. Dewey, John Liberalism and Social Action (New York: Capricorn Books, 1963), p. 67

10. Problems of Men, p. 61

in arriving at the truth is a matter that must be empirically verifiable; and the conclusions reached by inquiry must also be submitted to verification. Thus, individual freedom presupposes the existence of public or collective authority. And this, quite possibly, implies the following two things: In the first place, each individual is free to conduct inquiries in his own way, but the most efficient method of inquiry will emerge at a certain point in time as a result of the cooperative efforts of individuals. This efficient method of inquiry becomes the authority which all individuals involved must accept until it is replaced by another method of inquiry invented by some individual or individuals which proves more effective than the one already established. In the second place, the same is true about scientific conclusions which will emerge as a result of the cooperative efforts of individuals and which will retain their authority till they are replaced by new discoveries. Thus, freedom of intelligence is grounded on the authority of collective intelligence; it is different from what Dewey calls old-fashioned individualism, the unrestrained power of the individual to do as he pleases. He says,

We need an authority that, unlike the older forms in which it operated, is capable of directing and utilizing change, and we need a kind of individual freedom unlike that which the unconstrained economic liberty of individuals has produced and justified; we need, that is, a kind of individual freedom that is general and shared and that has the backing and

guidance of socially organized intelligent control.¹¹

In Dewey's view, the conduct of cooperative inquiry as displayed in the field of natural science is a "working model" of the union of freedom and authority.

So much for Dewey's conception of freedom. The idea of equality in a democratic society has, for Dewey, a double meaning. In the first place, equality means that each individual is equally unique and irreplaceable in quality. Dewey says,

Now whatever the idea of equality means for democracy ... It means that every existence deserving the name of existence has something unique and irreplaceable about it... It means that no matter how great the quantitative differences of ability, strength, position, wealth, such differences are negligible in comparison with something else — the fact of individuality, the manifestation of something irreplaceable.¹²

This conception of equality implies that no two individuals are identical in intrinsic quality and that one individual is incapable of equation with another individual. For this reason, each individual must be considered on its own behalf. In his discussion of Plato's philosophy of education, Dewey points out that no one could better express than did Plato the fact that it is the business of education to discover the capacities of each individual. However, Dewey maintained that what was fatal to Plato's philosophy of education was that "he had no perception of the uniqueness of indivi-

11. Ibid., p. 101

12. Characters and Events, Vol. II, p. 854

duals."¹³ For Plato individuals fall into a very small number of classes, but for Dewey each individual has his own unique place in society.

In the second place, equality means that all individuals must have an equal opportunity to participate in social inquiries as well as to share in social interests. Dewey says,

Equality denotes the unhampered share which each individual member of the community has in the consequences of associated action.¹⁴

According to Dewey, the idea of liberty in a democratic society is based upon the conviction that through the free participation of each individual according to capacity in the activities of the groups to which he belongs, and the equal sharing in the consequences of associated action, the work of the world will be better done than when controlled by a few, no matter how wise or of how good intent that few may be.

From Dewey's point of view, although individuality is unique, yet it is at first unshaped, it is merely a potentiality, a capacity for development. The individual's unique quality can be developed in shape and form only through association and interaction with others. The fact that each individual through association and interaction with others develops his own individuality and makes the individuality of others more distinctive is called

13. Democracy and Education, p. 104

14. The Public and Its Problems, p. 150

fraternity. Dewey remarks,

there is nothing forced in understanding fraternity... as association and interaction without limit... To say that what is specific and unique can be exhibited and become forceful or actual only in relationship with other like beings is merely, I take it, to give a metaphysical version to the fact that democracy is concerned... with associated individuals in which each by intercourse with others somehow makes the life of each more distinctive.¹⁵

Dewey is of the opinion that while individuality is a distinctive way of living, feeling and acting, it is not complete in itself. Take, for example, the unique ingenuity of an artist. It is true that the work of art is created by the artist's distinctive vision and power, but it is equally true that his vision and power are developed in the very process of his association and interaction with others. No individual can isolate himself from others without losing his individuality. It is only through our association and interaction with others that we "create ourselves as we create an unknown future."¹⁶

In short, Dewey's conception of democracy as a social ideal consists in liberty, equality, and fraternity. Dewey particularly selects two criteria to present the ideal of a democratic way of social life. He says,

The two points selected by which to measure the worth of a form of social life are the extent in which the

15. Characters and Events, Vol. II, pp. 854-5

16. Dewey, John Individualism, Old and New, (New York: Minton, Balch and Company, 1930), p. 171

interests of a group are shared by all its members, and the fullness and freedom with which it interacts with other groups.¹⁷

A democratic society is one in which individuals are free to develop, each in his own way, their intelligence, and to contribute it to the organized intelligence; to participate in social inquiries and share in social interests; to be associated and interact with each other in social life. Freedom of intelligence, of participation and sharing, of the development of individuality, of association and interaction are essential for a democratic social life.

We have so far exposed Dewey's conception of democracy. The next question that arises at this point is: How is this conception of democracy to be evaluated ? Now, Dewey himself at one point draws a distinction between intrinsic and instrumental values. Intrinsic values refer to the things we prize and esteem, and instrumental values refer to the things which are means of attaining intrinsic values. Dewey says,

We may imagine a man who at one time thoroughly enjoys converse with his friends, at another the hearing of a symphony; at another the eating of his meals; at another the reading of a book; at another the earning of money, and so on. As an appreciative realization each of these is an intrinsic value.¹⁸

An intrinsic value is something we enjoy, it is not a means to anything beyond itself. On the other hand, an instrumental value

17. Democracy and Education, p. 115

18. Ibid., p. 280

is always a means of realizing something else. Dewey remarks, "Things judged or passed upon have to be estimated in relation to some third thing, some further end. With respect to that, they are means, or instrumental values."¹⁹ Strictly speaking, however, no material things can be "intrinsic values" in Dewey's sense, because all intrinsic values are human activities. Suppose, for example, we enjoy hearing a symphony for its own sake; the hearing of a symphony in this case is an intrinsic value to us, but the symphony is an instrumental value, because it owes its value solely to the fact that it is the object of our enjoyment. Now, with respect to the value of democracy, Dewey apparently wishes to hold the position that its value is both intrinsic and instrumental. In the first place, Dewey explicitly suggests that most people would enjoy a democratic way of life just for its own sake. In discussing the value of free inquiry, Dewey says, "The delights of thinking, of inquiry, are not widely enjoyed at the present time. But the few who experience them would hardly exchange them for other pleasures."²⁰ This possibly implies that freedom of inquiry which is the heart of Dewey's conception of democracy is an intrinsic value in the sense that it is an activity that can be performed for its own sake. However, it seems that the important point Dewey is most concerned with is the instrumental value of

19. Ibid., p. 280

20. Individualism, Old and New, p. 161

democracy. Dewey holds that if a truly democratic community is to come into existence, man needs to build a store of scientific knowledge about social phenomena, but before the store of such scientific knowledge can be built, the conditions exemplified in his conception of democracy must be fulfilled. This suggests that democracy is a means of constructing a truly democratic community. Also, the instrumental value of Dewey's conception of democracy is subject to public testing. This point is admitted by Dewey when he suggests that "if democracy be a serious, important choice and predilection it must in time justify itself by generating its own child of wisdom, to be justified in turn by its children, better institutions of life."²¹ On the one hand, then, the instrumental value of democracy can be tested by determining whether it is capable of generating better social institutions which are effective in promoting social inquiry with the aid of science. Also, on the other hand, it can be tested by determining whether the employment of science in social inquiry and the acquiring of scientific knowledge about social phenomena result in the development of a truly democratic community as understood by Dewey.

There are, however, two difficulties of a practical nature in connection with determining the instrumental value of democracy. In the first place, socio-political institutions are extremely

21. Characters and Events, Vol. II, p. 855

difficult to experiment with and the results of the experiment are difficult to assess. As Geiger pointed out,

For example, how can the present threat of world war ... be experimentally handled ?... In fact, in the political dimension, "experiments"... begin to appear absurd or tragic.²²

In the second place, even if it is possible to experiment with social institutions, many people are inclined to believe that the results are far from being desirable. For instance, according to Dewey, the democratic faith is faith in cooperative intelligence, in each individual's concern for the public interest, in the use of scientific methods to solve social problems. Nevertheless, as Murphy pointed out, "in practice it did not work that way."²³

Murphy said,

When men asked in earnest for the common meaning in community that would distinguish its cooperative intent from the push and pull of competing class interests his philosophy could answer only in morally empty and therefore practically equivocal terms. It had deprived itself of the moral means of making this distinction.²⁴

In Murphy's view, people often employ the political instruments to pursue their own interests, and in the era of the cold war, for

22. Geiger, George Raymond "Dewey's Social and Political Philosophy" in Paul Arthur Schilpp (ed.) The Philosophy of John Dewey, (Evanston and Chicago: Northwestern U. 1939, 337-368), p. 362

23. Murphy, Arthur E. "John Dewey and American Liberalism" Journal of Philosophy, Vol. 57, 1960, 420-436, p. 431

24. Ibid., pp. 432-3

instance, scientific discoveries often become military secrets which cannot be made public.

It must be admitted that under the present circumstances, experiments in the socio-political dimension seem very unrealistic and that even in a democratic society, it has not infrequently happened that those who are in power tend to employ the political instruments to pursue their own selfish interests. However, it should be observed that what Dewey really wishes to contend is that if the conditions exemplified in his conception of democracy are fulfilled, a store of scientific knowledge about social phenomena will be built and that if the store of scientific knowledge about social phenomena is built, a truly democratic community will come into existence.

In Dewey's view, democracy and science are closely related to each other in social reconstruction. So far we have been primarily concerned with Dewey's position that the conditions exemplified in his conception of democracy must be fulfilled if scientific methods are to be employed for the purpose of social reconstruction. This implies that democracy has been regarded as a means for obtaining scientific knowledge about social phenomena. However, Dewey also holds that democracy is an end in relation to which science is a means. Dewey says,

Positive science always implies practically the ends which the community is concerned to achieve. Isolated from such ends, it is matter of indifference whether its disclosures are used to cure disease or to spread

it; to increase the means of sustenance of life or to manufacture war material to wipe life out. If society is interested in one of these things rather than another, science shows the way of attainment.²⁵

As we have seen previously that Dewey puts forward two points to represent the ideal of democracy, first, the interests of a social group are shared by all its members, and, second, each social group interacts with other social groups. Science has a great deal to contribute to the realization of this democratic ideal. For example, when two or more competing ends imposed by the conditions of the situation are to be pursued by a social group, the function of science is that of determining what end can be genuinely shared by all members of the group. And when two different groups pursue different interests, science can provide the means for promoting the interaction between these two groups with regard to their interests. In short, successful realization of the democratic ideal depends upon the means provided by the development of science. And the society that has fully realized this democratic ideal becomes what Dewey calls a great community.

25. Democracy and Education, p. 384

CHAPTER VIII

PHILOSOPHY OF EDUCATION AND EDUCATIONAL THEORY

Dewey holds that education is such an important matter that a philosophy of education is needed to direct our educational activity. It can be said that Dewey has never had the slightest doubt that philosophy of education is indispensable to educational practice. Just as the problems of contemporary life are to be solved in the light of a comprehensive philosophy, the problems of educational practice must be approached in the light of a comprehensive philosophy of education. Dewey says,

Education is such an important interest of life that in any case we should expect to find a philosophy of education, just as there is a philosophy of art and religion.¹

Philosophy of education is, for Dewey, an attempt to consider how the "ultimate principles" of philosophy are to be put into practice in education. In Dewey's view, philosophy is, as we have seen, an attempt to discover a small number of "ultimate principles" by which conflicting beliefs in social life may be reconciled and a more consistent and harmonious pattern of life established. However, the conflict of beliefs in social life will not be practically resolved unless a program of education is designed to culti-

1. Dewey, John "Philosophy of education" (in A Cyclopedia of Education, Vol. IV, New York: The Macmillan Company, 1918, 697-703), p. 699

vate the kind of mental disposition to which the ultimate principles of philosophy correspond. For example, if philosophy suggests to us that man's beliefs about matters-of-fact and his beliefs about values are in conflict, and that if these two kinds of beliefs are to be reconciled they must both be reached through competent inquiries, the task of a philosophy of education will be to show what kind of education individuals should have so as to be able to conduct competent inquiry. In short, the task of philosophy of education is that of translating the principles of philosophy into their "educational equivalents as to what to do and what not to do."² It can be said that Dewey is, in fact, using philosophy of education and educational equivalents of philosophy as two synonymous phrases. From Dewey's standpoint, philosophy is "the general theory of education" in the sense that its principles can be translated into their educational equivalents.

One central point in Dewey's conception is that the function of a philosophy of education is to promote communication between philosophy and educational practice. This position has been supported by quite a few contemporary philosophers of education. Broudy, for example, tells us that it is the business of a philosophy of education to make explicit the relation between an educational problem and a philosophical issue. In Broudy's view, there

2. Democracy and Education, p. 384

are, at least, two ways in which this requirement of philosophy of education can be met. In the first place, philosophy of education may take its departure "from educational problems and... solve them by constructing an educational theory — more or less adequately grounded in philosophy."³ That is to say, whenever an educational problem arises, a philosopher of education must try to solve it by constructing an educational theory which must be more or less adequately grounded in logic, epistemology, metaphysics, ethics, and general value theory. Thus, the discussion of the possible solution of an educational problem will lead us to the discussion of philosophical issues involved. In the second place, a philosophy of education may as well attempt to apply or employ a general philosophical position in considering an educational problem. As Broudy writes,

Another and more common method of building a philosophy of education is to derive it from some philosophic position such as Idealism, Realism, Thomism, Pragmatism, or Existentialism. This approach asks the question: What does a given position imply for education ?⁴

It thus seems that philosophy of education may approach the task of building an educational theory in two different ways. A philosopher of education may justify an educational theory by reference to philosophy; or he may try to derive an educational theory

3. Broudy, Harry S. "How philosophical can philosophy of education be ?" Journal of philosophy, Vol. LII, 1955, 612-622, p. 617

4. Ibid., p. 617

from philosophic premisses. In short, what Broudy is actually arguing is that the task of philosophy of education is to promote some form of communication between philosophy and educational practice. This view of philosophy of education seems to be supported by Price when he tells us that the task of philosophy of education is to relate education and philosophy in a certain way. While Broudy stresses that philosophy of education may try to build an educational theory by reference to philosophy, and/or try to derive an educational theory from a given philosophical position, Price seems to argue that a philosophy of education must try to relate educational practice to philosophy by arriving at "certain theories, those of metaphysics, ethics, epistemology, aesthetics, and logic."⁵ However, it must be observed that what Price is really anxious to maintain is that a philosopher of education must try to approach educational problems in terms of metaphysics, ethics, epistemology, aesthetics, and logic. It can, then, be said that Dewey, Broudy, and Price have one thing in common, namely, that philosophy of education is a "form" of communication between philosophy and educational practice.

However, when one does hold the view that philosophy of education is a to-and-fro movement between philosophy and educational practice, one is assuming that there is some kind of connection

5. Price, Kingsley "Is a philosophy of education necessary ?"
Journal of Philosophy, Vol. LII, 1955, 622-633,
 p. 624

between philosophy and educational practice. And one soon gets into difficulties when one attempts to explain the precise nature of the supposed connection between the two. Edward Best, for example, argues that those who use the phrase "philosophy of education" are making the common assumption that "the aims or purpose of education can be supplied by some sort of philosophical inquiry."⁶ This common assumption is, according to Best, invalid, for the aims or purpose of education may be put forward by anyone, not on the basis of any philosophical inquiry, but rather on the basis of personal decisions. Best says,

An educational aim can be put forward by anybody, but whether it is good or bad, foolish or wise, is something on which each of us must make up his own mind. Philosophy cannot help here.⁷

Best is of the opinion that it is indeed possible and also necessary for us to build educational theories for the purpose of directing our educational activities, but such educational theories are merely advices as to what should be done and what should not be done in education. As he says,

there is no lack of agreement that educational theories are meant to guide and advise teachers in their educational activities, and this is true whatever explanation we give of the language of advice.⁸

6. Best, Edward "Common confusions in educational theory" in R. D. Archambault (ed.) Philosophical Analysis and Education, (Routledge, 1965, 39-56), p. 47

7. Ibid., p. 53

8. Ibid., p. 40

In Best's view, the educational writings of many distinguished philosophers, such as Plato, Locke, Rousseau, Kant, Russell, and Dewey, were quite independent of what they said in their famous philosophical works. This means that their educational theories represent their advices as to what we should do and what we should not do in education which are more or less independent of their philosophical positions. Best concludes,

A philosophy of education is only a theory of education masquerading under a fancy name, and one cannot but suspect that many of those who freely use this phrase mean only the educational theories of people with a historical reputation as philosophers.⁹

The fact that there are educational problems which require solution would probably be admitted by all. Also, it may be granted that one cannot derive solution of an educational problem from a given philosophical position. However, it does not follow from this that there cannot be a philosophy of education as different from what may be called an educational theory. For example, the fact that it is not possible for us to derive a particular moral decision from a system of philosophy does not imply that there cannot be a moral philosophy. Just as moral advice must be distinguished from moral philosophy, educational theory taken as a sort of advice in matters of education can be distinguished from philosophy of education. This is precisely what Reid tried to do when he proposed,

9. Ibid., p. 49

What I would like to try to do is to state, as clearly as I can, after the reflections and discussions of fifteen years as Professor of Philosophy of Education at London, the nature of philosophy of education as I see it, its relation to what is called 'educational theory', and the relation of both to the practice of education.¹⁰

Although Reid tried to draw a distinction between philosophy of education and educational theory, his distinction was not convincingly clear. Reid said,

Philosophy of education will be the use of philosophical instruments, the application of philosophical methods, to questions of education, as well as the relation to education of the relevant results of philosophical thinking.¹¹

It is to be noted that Reid does not use the expression "educational practice" in the passage quoted above. However, his view of philosophy of education may be interpreted as a to-and-fro movement between philosophy and educational practice. That is to say, whenever the questions of education arise, a philosopher of education may make use of philosophical instruments and methods to deal with them, and he may also try to relate in a certain way the results of philosophical thinking to educational practice.

According to Reid, educational theory does not designate "any single coherent body of knowledge"¹² in the sense that mathematics,

10. Reid, L. Arnaud "Philosophy and the theory and practice of education" (in R. D. Archambault (ed.) Philosophical Analysis and Education, Routledge, 1965, 17-37), p. 17

11. Ibid., p. 26

12. Ibid., p. 19

science, and history are bodies of knowledge; rather it contains "all reflection and talk about education of whatever kind and all levels."¹³ In other words, the distinction between philosophy of education and educational theory is, in Reid's view, that philosophy of education is a systematic philosophical discussion of educational problems, while educational theory is a consideration of the problems of education with a view to arriving at solutions of these problems. Thus, Reid argues that philosophy of education "can and must be pursued for its own intrinsic intellectual interest, and not because one is thinking always of the reform of education."¹⁴ Although Reid's distinction between philosophy of education and educational theory is by no means clear or satisfactory, nevertheless his contention that philosophy of education can and must be distinguished from educational theory merits consideration. Educational theory may be conceived as a set of recommendations with regard to what should be done in education; it recommends some plausible solution to the problems of educational practice. Suppose, for example, we are in doubt as to whether religion should be taught in high schools; we may devise an educational theory to give an answer to this question. The task of educational theory is, thus, either to propose a solution to a practical educational problem, or to prescribe a course of action to be taken in educational activities.

13. Ibid., p. 19

14. Ibid., p. 27

On the other hand, philosophy of education may be conceived as both method and a body of subject-matter. As method, philosophy of education is, to use Scheffler's words, "the extension of philosophical methods of analysis to educational contexts,..."¹⁵ This view of philosophy of education is rather popular at the present time and does not require any detailed discussion. There are terms and propositions in all sorts of discussion about education which are ambiguous or even confusing, and which demand clarification through philosophical analysis. Few people would be inclined to dispute that as philosophical methods of analysis in education, philosophy of education is necessary and useful. However, some would surely object to the assertion that philosophy of education can also be conceived as a body of subject-matter. As a matter of fact, quite a few people have argued that all philosophers are now linguistic analysts, and that philosophy of education other than philosophical analysis does not exist. Hardie, for example, tells us that the revolution in philosophy has reduced philosophy to a method of analysis, and that by analyzing the use of a concept or term in educational contexts, all philosophical problems and puzzlement in education can be removed. This implies that philosophy of education as a body of subject-matter does no longer exist. Hardie writes,

15. Scheffler, I. "Introduction to the first edition" (in his (ed.) Philosophy and Education, 2nd ed., Allyn and Bacon, 1966), p. 3

The philosophy of education now becomes not a body of knowledge, but the kind of analysis one practises when certain concepts in education look like giving rise to this kind of puzzlement.¹⁶

In Hardie's view, there are two and only two kinds of genuine knowledge, analytic and empirical. In a genuine branch of analytic knowledge, such as mathematics, a statement asserts an equivalence of symbols, and in a genuine branch of empirical knowledge, such as physics, a statement asserts about some empirical fact. If one does claim that philosophy of education is a genuine branch of knowledge, one must be prepared to put forward, at least, one instance of genuine knowledge which is either analytic, or empirical. If one cannot put forward one instance of genuine knowledge in the philosophy of education which is either analytic or empirical, one must admit that "there is at any rate something very queer"¹⁷ about the alleged content of philosophy of education.

One way of meeting Hardie's challenge with regard to the content of philosophy of education is to maintain that all knowledge is not necessarily either analytic or empirical. There is another important area of knowledge which is either prescriptive or evaluative. Knowledge that something is the case is normally communicated by means of descriptive propositions. Knowledge that two symbols are logically

16. Hardie, C. D. "Education and the Revolution in Philosophy"
The Forum of Education, XXII, 66-67

17. Hardie, C. D. "Has the philosophy of education any content ?"
The Forum of Education, XXIV, 58-60

equivalent is normally communicated by means of analytic propositions. However, knowledge that the meaning of a term may be conceived in a certain way must be communicated by means of prescriptive propositions, and knowledge that some object is a value must be communicated by means of evaluative propositions. Take, for instance, the question put forward by Mackie as one of the genuine questions in philosophy of education: "is education the transmission of knowledge or is it the development of critical thinking ?"¹⁸ Suppose, for example, some one answers that education is the development of critical thinking, his answer may be intended to have a variety of meanings. First, it may be intended to mean that the term "education" has most frequently been used by most people for the development of critical thinking. Second, it may be intended to mean that the development of critical thinking very often takes place in school. Third, the answer may also be intended to mean that the term "education" can and must be understood as the development of critical thinking. It must be admitted that if the answer is intended to have either one of the first two meanings, it is a descriptive proposition and can be tested by making the appropriate observations. However, when the answer is intended to convey the third meaning, it is a prescriptive proposition.

We are all of us quite familiar with how Plato, Rousseau, and

18. Mackie, Margaret "The philosophy of education" The Forum of Education, XXIII, 126-129

Dewey had used the term "education" in different ways, but it will be incorrect to say that they had meant to describe how most people of their respective times had used it. For example, Plato holds that educational process is a moulding one, it is an instrument of culture for the purpose of preserving and strengthening the State. According to Rousseau, however, education is a process whereby the child may be enabled to avoid the control of the State and the evils of the society. In Dewey's view, education is the process of continual reconstruction of experience. Each of these three views of education is a prescription, not description, of the meaning of education. Each philosopher of education may use different terms in different ways, and his conception that a given term can and must be used in a certain way can only be communicated by means of prescriptive propositions. There is no reason why knowledge of this kind cannot be considered as "genuine" as analytic or empirical knowledge.

It is also possible to illustrate the point by referring to other branches of philosophy. Consider, for example, G. E. Moore's ethics. The most outstanding terms used in Moore's ethics are intrinsic value, duty, virtue, vice, etc.. Although the same terms have been used by different ethical philosophers, they have been defined in different ways. For example, both Moore and Dewey use the phrase "intrinsic value" in their ethics. However, the phrase occupies a very fundamental place in Moore's ethics, while in Dewey's ethics, the same phrase is relatively unimportant. Moreover, the

phrase is defined differently in these two different systems of ethics. In Dewey's ethics, intrinsic value is defined as an appreciative realization which occupies a particular place in life that cannot be supplied by a substitute. Dewey says,

We may imagine a man who at one time thoroughly enjoys converse with his friends, at another the hearing of a symphony; at another the eating of his meals; at another the reading of a book; at another the earning of money, and so on. As an appreciative realization, each of these is an intrinsic value. It occupies a particular place in life; it serves its own end, which cannot be supplied by a substitute.¹⁹

On the other hand, Moore's definition of intrinsic value differs radically from Dewey's. He defines it by making reference to the intrinsic nature of the object. Moore says,

To say that a kind of value is "intrinsic" means merely that the question whether a thing possesses it, and in what degree it possesses it, depends solely on the intrinsic nature of the thing in question.²⁰

Another kind of knowledge in philosophy of education is the knowledge that something is a value in education which is communicated by means of evaluative propositions. To know that this object is a table, for instance, is quite different from knowing that this object is good. The former is descriptive knowledge, while the latter is evaluative knowledge. It seems rather rash to assert dogmatically

19. Democracy and Education, p. 280

20. Moore, G. E. "The conception of intrinsic value," (in his Philosophical Studies, New Jersey: Littlefield, Adams and Co., 1965, 253-275), p. 260

that descriptive knowledge is more genuine than evaluative knowledge. For example, it is not enough to know about the multitude of different aims for education that have been put forward throughout history, we need also to know what aims are good aims. A philosopher of education may devise a system of educational values and present the grounds on which his system is based. In Plato's philosophy of education, for example, music, gymnastics, mathematics, geometry, and dialectic are put forward as educationally valuable. Harmony and unity within the State are the ultimate goals to be achieved, because the individual is not considered as an end in himself but as a part of the State. On the other hand, Rousseau's system of values in education differs radically from that of Plato. In Rousseau's philosophy of education, the most essential values include: the studies of history, literature and natural religion; the cultivation of the child's self-sufficiency, natural freedom, true emotions and direct experience of the personal relationships of friendship and human helpfulness; the development of the civil society governed by the general will. From Dewey's point of view, all studies are valuable in education so long as they promote the child's interests. However, Dewey stresses such educational values as science, democracy, the development of the child's intelligence, social adjustment, etc.. It must be observed that different systems of values presented by different philosophers do not provide us with any specific recommendation as to what we should do in dealing with

a particular problem of education. Rather, each system of values presented formulates the possible educational values to be considered, their acceptability must ever remain open, so that we have to exercise our own judgment. A philosopher of education can point us in the direction of wisdom, but the decision to accept or reject his system of values must come from each man himself. Therefore, we cannot hope to study philosophy of education in a search for the true system of values. What we can hope is to understand each system of values put forward by great philosophers of education and the grounds underlying it, not as a system in which a set of practical answers has been established, but as a system in its constant openness. If we do, we would have to agree with G. E. Moore that whether something is really a value must always remain an open question.

What has been said is intended to demonstrate the fact that two philosophers may use different terms in their ethics, and that even if they use the same terms, they may define them differently. Moreover, two philosophers may put forward two different systems of values which are communicated by means of evaluative propositions. As a result, two diverse systems may contain different prescriptive and evaluative terms and propositions systematized in different ways. The contrast between Dewey's ethical philosophy and that of Moore or between Plato's philosophy of education and that of Rousseau is a case in point.

Philosophy of education may thus be said to include prescriptive

and evaluative terms and propositions as its distinctive subject-matter. It can be argued that philosophy of education should be treated as a discipline in the same sense in which mathematics or geometry is a discipline. Just as each significant system of geometry, such as the one developed by Euclid in 300 B. C. or by Riemann in 1854, represents a discipline, so each significant system of philosophy of education, such as the one developed by Plato, Rousseau, or Dewey, represents a discipline. To learn something about euclidean geometry, for example, is to learn what terms are used, and how they are actually defined, as well as to learn how the theorems are implied by the axioms in that system. By the same token, to learn something about Dewey's philosophy of education is to learn what terms are used and how they are defined as well as to learn what propositions are put forward and how they are systematized; to learn something about Dewey's educational theory is to learn what recommendations he has made as to what should be done and what should not be done in educational practice. Moreover, just as we can compare different systems of geometry, we can also compare different systems of philosophy of education. There is no reason why we should not look upon philosophy of education as a discipline in the same sense in which geometry is looked upon as a discipline.

In short, philosophy of education is not merely a means by which communication between philosophy and educational practice is promoted, nor is it identical with educational theories that are meant to advise

teachers in their educational activities. Philosophy of education, like philosophy of art and religion, social philosophy, moral philosophy, etc., has its own independent subject-matter that contains a body of prescriptive and evaluative terms and propositions defined and systematized from the standpoint of and for the sake of philosophic discourse in education. Speaking of the distinction between axiomatic geometry and practical geometry, Einstein stated that axiomatic geometry contains such terms as straight line, point, etc., and a multitude of related propositions and that "axiomatic geometry by itself contains no assertions as to the reality which can be experienced, but can do so only in combination with physical laws,"²¹ which rest essentially on the coordination of practical experience with logical inferences. As a result of this combination, practical geometry has come into being which refers to real objects of experience. By the same token, philosophy of education, which contains a body of prescriptive and evaluative terms and propositions, by itself makes no recommendations as to what should be done in educational practice, but can do so only in combination with practical experience and personal decisions. As a result of this combination, educational theories may come into existence which are meant to advise teachers in their educational activities. The fundamental

21. Einstein, Albert "Geometry and experience" (in his Ideas and Opinions, New York: Crown Publishers, INC., 1962, 232-246), p. 235

difference between philosophy of education and educational theory is that one is concerned with the assertions about education, whereas the other is concerned with the action to be taken in educational practice. For this reason, philosophy of education, as distinct from educational theory which is practical, is a purely theoretical discourse.

CHAPTER IX

DEWEY'S DEFINITION OF EDUCATION

Dewey holds that education is concerned with experience and ability to direct the course of experience. And, as will be shown, in one sense "experience" for Dewey is a short name for what one learns through the conduct of inquiry about the connections between things as cause or means and other things as effect, consequences, or ends. These connections constitute the meaning of experience. On the other hand, the child's ability to direct the course of experience constitutes his intelligence. Dewey remarks,

We thus reach a technical definition of education:
It is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.¹

Dewey's definition of education implies four propositions. The first proposition is that education is concerned with experience. What is experience ? A baby acts capriciously without anticipating or learning the connection between his action as means and the changes produced by its action as consequences or end. Such activity can hardly be called experience. But when, for instance, a child touches a flame by accident and learns that his pain is a consequence of his action, he has an experience in its crude form. Because he learns that the act of touching a flame is connected with pain. This con-

1. Democracy and Education, pp. 89-90

nection constitutes the meaning of his experience. Dewey says,

experience involves a connection of doing or trying with something which is undergone in consequence. A separation of the active doing phase from the passive undergoing phase destroys the vital meaning of an experience.²

When we wish to determine the connections between things as cause or means and other things as effect, consequences, or ends, we must conduct an inquiry. When a man is ill, for example, his end is the attainment of health. Therefore, what he must do is to inquire into the connection between the sort of action he must take as a means and the recovery of his health as an end. The attainment of the true connection between the action he takes as a means and his health as an end is the goal of his inquiry. This connection, as we have seen, constitutes the meaning of his experience. However, it must be noted that for Dewey, experience, belief, and knowledge are three different names for the same thing. That is to say, they all refer to the connections between things as cause or means and other things as effect, consequences or ends. When a man is lost in the woods, for instance, he needs to conduct inquiry in order to find a correct line of action which will enable him to get out of the woods. That is to say, he needs to inquire into the connection between a certain line of action as a means and his getting out of the woods as an end. The successful outcome of his inquiry constitutes his experience,

2. Ibid., p. 177

belief, or knowledge. Therefore, when Dewey says that education is concerned with experience, this proposition is equivalent to the proposition that education is concerned with the attainment of belief and knowledge.

However, in Dewey's view, no inquiry affords the guarantee that its conclusion will not be confuted on some future occasion, no matter how competent we may take it to be. Dewey advocates,

The "settlement" of a particular situation by a particular inquiry is no guarantee that that settled conclusion will always remain settled. The attainment of settled belief is a progressive matter; there is no belief so settled as not to be exposed to further inquiry.³

Since no experience, belief, or knowledge is independent of further inquiry, it follows that any experience, belief, or knowledge must be continually reconstructed. This is the second proposition implied by Dewey's definition of education, namely, education is a constant reconstruction of experience.

The third proposition implied by Dewey's definition of education is that education adds to the meaning of experience. This proposition must be distinguished from the second one which asserts that education is a constant reconstruction of experience. The assertion that an experience is reconstructed means that it is modified, it does not necessarily mean that its meaning is also increased. According to Dewey, the increment of the meaning of experience is equivalent

3. Logic: The Theory of Inquiry, p. 8

to the increment of our knowledge about the connections between things as cause or means and other things as effect, consequences, or ends. At the beginning, for example, a child may come to experience the connection between A as a means and B as an end. But his experience may be confuted by his second inquiry which reaches the conclusion that A is connected with C, instead of B. This means that the child's experience with regard to the connection between A as a means and B as an end has been reconstructed, and as a result, a new meaning of A and a new connection between A as a means and C as an end has been established.

When the child has grasped the connection between A as a means and B as an end, he has an experience. Supposing that he conducts a third inquiry which not only confirms the connection between A as a means and C as an end, but also establishes a new connection between A as a means and D as an end, then it can be said that the child has not only reconstructed his experience, but also increased the meaning of his experience. Dewey says that the increment of the meaning of experience "corresponds to the increased perception of the connections"⁴ between things as cause or means and other things as effect, consequences, or ends. For example, a child first experiences the connection between heat and light, and subsequently he may come to experience the connections between heat and combustion,

4. Democracy and Education, p. 90

oxidation, temperature, etc..

The fourth proposition implied by Dewey's definition of education is that education is the development of ability to direct the course of subsequent experience. When a child has learned the connection between A as a means and B as an end, the most we can say is that he has an experience. When he has come to learn that A is connected with C, instead of B, his experience about the connection between A and B has been reconstructed, and when he has further learned the connection between A as a means and D as an end, he has increased the meaning of his experience about the connection between A and C. Up to this point, education is a constant development and reconstruction of experience, belief or knowledge. However, education has another dimension which is the cultivation of intelligence. Dewey says,

I am pretty well used to having my writings on value, and on social topics generally, criticized as based upon an extremely exaggerated view of intelligence — that word being, in my use of it, a short name for competent inquiry at work.⁵

Education as a process of cultivating intelligence is to be distinguished from education as a constant development and reconstruction of experience, belief or knowledge. These are two different dimensions of education. The child's awareness of the connections between A as a means and C and D as ends only constitutes his experience,

5. Problems of Men, p. 330

belief or knowledge; it does not necessarily mean that he also has intelligence. The child's intelligence consists in his ability to conduct competent inquiry for the purpose of acquiring experience, belief, or knowledge. This is precisely what Dewey means when he advocates that education is to increase ability to direct the course of subsequent experience. Dewey says,

As an individual passes from one situation to another, his world, his environment, expands or contracts... What he has learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow. The process goes on as long as life and learning continues. Otherwise the course of experience is disorderly, since the individual factor that enters into making an experience is split.⁶

The mere fact that the child has learned the connection between A as a means and C as an end does not afford the guarantee that he will also learn the connection between A and D. The individual factor that makes the acquiring of new experience possible is intelligence. That is to say, the child must have ability to perform competent inquiry, and the cultivation of such ability is the second dimension of education.

We have pointed out that in Dewey's view, there are two dimensions of education, one is the constant development and reconstruction of experience, belief or knowledge, the other is the cultivation of intelligence. These two dimensions of education are designated

6. Dewey, John Experience and Education (New York: The Macmillan Company, 1947), pp. 42-3

by the growth of experience and the growth of intelligence respectively. This is the reason that for Dewey, education and growth are identical. Dewey says,

Since growth is the characteristic of life, education is all one with growing; it has no end beyond itself. The criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact.⁷

Therefore, it can be said that in Dewey's view, education is the continuous growth of knowledge and intelligence. It is not difficult to understand what Dewey means by the growth of knowledge and intelligence. To recur to our simple example, a child experiences the connection between A as a means and B as an end. This is the characteristic of the growth of his knowledge. When the child further learns that A is connected with C but not with B, he has promoted another growth of knowledge. If subsequently, the child learns that A is also connected with D, the growth of his knowledge becomes even more evident. Hence by the growth of knowledge, Dewey means the following things: the acquiring of experience, the reconstruction of experience, and the increment of the meaning of experience. But the growth of the child's knowledge and the growth of his intelligence are not identical, though they are connected with each other. The growth of the child's knowledge means that he has actually acquired the knowledge of certain connections between things as cause

7. Democracy and Education, p. 62

or means and other things as effect, consequences, or ends, which had not been previously known by him. On the other hand, the growth of the child's intelligence means that he has become more capable of knowing such connections. In short, the growth of intelligence means the increment of ability to perform competent inquiry.

We have briefly examined Dewey's definition of education according to which education means the growth of knowledge and intelligence; knowledge means the attainment of the connections between things as cause or means and other things as effect, consequences, or ends, and intelligence means the ability to perform competent inquiry.

At this point, however, Dewey suggests that education as such has no aims. Dewey says,

And it is well to remind ourselves that education as such has no aims. Only persons, parents, and teachers, etc., have aims, not an abstract idea like education. And consequently their purposes are indefinitely varied, differing with different children, changing as children grow and with the growth of experience on the part of the one who teaches.⁸

Why does Dewey wish to maintain that education as an abstract idea has no aims ? Does Dewey really try to tell us that American progressive education, for instance, had no aims ? These questions deserve our special attention. What Dewey really means by saying that education as an abstract idea has no aims is that the term education may be used in two different ways. That is, education may be used either

8. Ibid., p. 125

as an abstract term or as a concrete term. When it is used as an abstract term, it designates a definition or a criterion of education, and when it is used as a concrete term, it designates education in the concrete, such as German education in the nineteenth century, American progressive education, etc. Dewey says that any given term "is either existential or conceptual in reference. All other distinctions are either aspects of this fundamental distinction in logical office or are derived from it."⁹ Dewey holds that both abstract and concrete terms designate something, but the difference between the two consists in what is designated. Dewey says,

Any intelligible word designates something; otherwise it is a mere combination of sounds or visible marks, not a word at all. Xypurt, for example, designates nothing whatever in the English language. It is not a word. Denotative or existential terms and attributive or conceptual words are alike in designating something: they both have significance, for the meaning of words used can be understood. The important logical matter is the difference in what is designated.¹⁰

Therefore, according to Dewey, education may be used as an abstract term or as a concrete term. When it is used as an abstract term, it designates a definition of education, namely, it prescribes conditions any activity must satisfy if it is to be educative. On the other hand, when education is used as a concrete term, it designates this or that activity which takes place in time and space. Take, for instance, the distinction between ship and shipness. Ac-

9. Logic: The Theory of Inquiry, p. 351

10. Ibid., p. 360

According to Dewey, "ship" is a concrete term which designates this or that particular ship that exists in time and space. But shipness designates a definition of what it is to be a "ship"; it is a pre-description, not description, of conditions any object must satisfy if it is to be a "ship". From Dewey's point of view, it is rather unfortunate that we have to use the same word education in two different ways. It would be better if we could have one word to stand for education as an abstract term and another word to stand for education as a concrete term. For example, fatherhood as an abstract term is to be distinguished from father as a concrete term.

When education is used as an abstract term, it designates a definition of education, and as an abstract term, education has no aims, because it makes little sense to ask what the aim of an abstract term is. This point may be illustrated in terms of the following example. According to Dewey, colority as an abstract term is to be distinguished from color as a concrete term. Dewey says,

The scientific conception of colority is of a different logical dimension from that of colors and a color. Colority or being color is defined in terms of rates of vibration and whiteness is defined as the functional correlation of the radiating-absorptive capacity of these vibrations combined in a stated proportion. It is in effect a definition of conditions to be satisfied if a proposition, "This is white," is warranted.¹¹

Whenever we are asked as to what we mean by colority, the most we can say is that it designates a definition of being color. Certainly

11. Ibid., p. 258

we may elaborate the definition in question, but it makes no sense to ask: What is the aim of being color ? On the other hand, color is a concrete term that describes this or that color existing in time and space. And it certainly makes sense to ask: What is the use of this color ? That is to say, each color has its use which we may, if we like, call the aim of that color. The use of a given color may be determined by observation. By the same token, when education is used as an abstract term, it has no aims, because it only designates a definition of education. But when education is used as a concrete term, it describes a certain type of education which takes place in time and space. Therefore, we can examine the aim of a given type of education by observation. For example, we can examine the actual aim of Japanese education during the Second World War, or the actual aim of German education in the nineteenth century. This is why Dewey declares that persons, parents, and teachers have aims, not an abstract idea like education. Because when a person goes to college, for instance, he has some aim in mind to achieve. He wants to participate in a certain kind of activity which he thinks is educative, and hopes to get something out of his participation. When the parents send their children to school, they also expect them to become something. This is their aim of education. In short, education as an abstract term has no aims, but education in the concrete designated by the concrete term "education" has aims which are indefinitely varied, differing with different persons, parents and teachers.

Many of Dewey's critics have pointed out that Dewey is wrong or at least vague in contending that education is growth. Horne, for example, stated that it is not enough to say education is growth; we must add, education is growth toward some goal. Horne said,

Growth aims at more growth, and education is subordinate only to education. This is the theory. Its weakness is, growth needs a goal. There is no need to mince words at all. Children must be directed in their growth toward something worthwhile in personal and social relations.¹²

In reaction to Dewey's assertion that since education is all one with growing and since there is nothing to which growth is relative save more growth, there is nothing to which education is subordinate save more education, Ellis asked, "The question is still unanswered — why do we educate ? Toward what goals is our teaching directed ?"¹³ And in commenting on the conception of education as growth, Peters declared,

The problem for those who emphasise 'growth' is to do this in a way which does justice to the fact that no education can be indifferent to the way in which an individual grows.¹⁴

There is no need to quote further comments on Dewey's concept of

12. Horne, Herman Harrell The Democratic Philosophy of Education; Companion to Dewey's Democracy and Education, Exposition and Comment (New York: The Macmillan Company, 1932), p. 53

13. Ellis, Frederick Eugene "Dewey's Concept of Education for Growth" Educational Theory, Vol. V, 1955, 12-15, p. 12

14. Peters, R. S. "Education as Initiation" (in Archambault, Reginald D. (ed.) Philosophical Analysis and Education, London: Routledge and Kegan Paul, 1965, 87-111), p. 95

education as growth. The essential point is that the word education, in distinction from the words triangle, typewriter, animal, etc., is used either as a prescriptive or an evaluative term.¹⁵ For instance, when we say that the activity taking place here and now is educative, we are not merely describing the activity in question, we are also evaluating it. Again, when we say that Mr. X is an educated man, we do not merely mean that he had graduated from a certain academic institution, we also mean that he is in certain ways a good man. This means that education has been frequently used as an evaluative term. When a scientist defines colority in terms of rates of vibration, for instance, no one would object to his definition on the ground that it is not enough to define colority in terms of rates of vibration. Because it is sufficient for a scientist to define colority in such a way that he can properly use the word color as a descriptive term. No serious problem of any kind is involved here, for we normally do not use the word color as an evaluative term. The same also holds good of the words triangle, typewriter, animal, etc.. However, there are hundreds of words such as education, honesty, culture, father, etc., which are normally used as evaluative terms. When R. S. Peters, for example, tries to define education as initiation, he is apparently aware of this fact, for he maintains that education can be construed as initiation, "if it is also stipulated

15. Three categories of terms and propositions are discussed in detail in Chapter I, section 2.

that initiation must be into worthwhile activities and modes of conduct."¹⁶

As a matter of fact, many contemporary ethical writers have become more conscious of the distinction between terms that are primarily descriptive and terms that are mostly evaluative. For example, Stevenson noted that when we call someone a man of culture, we are not simply making a factual statement about the man, we also mean to say that he is a good man. This has led Stevenson to argue that the statement "X is good" means:

- (1) X is the case — descriptive
- (2) I approve of X and do so as well — emotive

In Stevenson's view, the word "good" is an evaluative term which can be divided into descriptive and emotive components. Stevenson said,

"This is good" has the meaning of "This has qualities or relations X,Y,Z,... except that "good" has as well a laudatory emotive meaning which permits it to express the speaker's approval, and tends to evoke the approval of the hearer."¹⁷

Another example is Hare's approach to ethics. Hare contends that terms such as honesty and lying are evaluative in character. He suggests that lying, for example, does not mean simply telling falsehoods, but telling falsehoods which is reprehensible. Thus, for Hare, there is a distinction between white lies and lies proper,

16. Peters, R. S. Op. cit., p. 102

17. Stevenson, C. L. Ethics and Language (London: Oxford University Press, 1944), p. 207

they are descriptive and evaluative respectively. This is precisely what Hare means when he maintains that all propositions of moral judgments "have to refer to the state of affairs which they are about."¹⁸ And at the same time, they must "entail an answer to some question of the form 'What shall I do ?'"¹⁹ This means that according to Hare, a proposition of moral judgment is evaluative, and it can be divided into descriptive and prescriptive components.

We have been concerned with the fact that education may be used both as a prescriptive term and as an evaluative term. Many people are inclined to think that Dewey's definition of education does not entitle him to use education as an evaluative term. That is to say, if education means the growth of knowledge and intelligence, we can only use this definition of education to describe whether certain activities are educative, but we are still not in a position to assert whether the activities are good. Because to assert that certain activities are good is to make an evaluative proposition. This seems the main reason why Dewey's critics are rather unsatisfied with his definition of education. What such critics are really looking for is a definition of education that permits the term education to be used evaluatively. This is the problem we are now faced with.

We have observed earlier that Dewey's definition of education consists of four propositions. If, however, a more satisfactory

18. Hare, R. M. The Language of Morals (Oxford, 1952), p. 22

19. Ibid., p. 29

definition of education based upon Dewey's position is to emerge, a fifth proposition must be incorporated. It may be recalled that according to Dewey, education is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience. When the fifth proposition is incorporated, Dewey's definition of education is transformed into the following: Education is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience, for realization of desirable ends. The fifth proposition incorporated may be stated as: Education means realization of desirable ends which is the third and normative dimension of education. This revised definition of education will entitle us to use the word education as an evaluative term.

It has been previously noted that when we define education as that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience, for realization of desirable ends, our definition consists of five propositions, namely, education is (1) the attainment of experience; (2) the reconstruction of experience; (3) the increment of the meaning of experience; (4) the cultivation of intelligence; (5) the realization of desirable ends. If X is substituted for (1)-(4), and Y for (5), we may say that the statement that the activity is educative means that the activity in

question consists of X which is conducive to Y. This interpretation of evaluative propositions differs, in a substantial way, from both Stevenson's emotive theory and Hare's approach. According to Stevenson, the difference between a descriptive proposition and an evaluative one is that the former refers to the state of affairs only, whereas the latter not only refers to the state of affairs, but also to the speaker's psychological or emotive disposition. Hare agrees with Stevenson that a descriptive proposition refers to the state of affairs, but he argues that an evaluative proposition refers not only to the state of affairs, but also to the personal decision. Therefore, on Stevenson's principle, the proposition that this activity is educative refers to (1) the activity that is taking place, (2) the speaker's emotive disposition. And on Hare's principle, the same proposition refers to (1) the activity that is taking place, (2) the speaker's personal decision. However, according to our interpretation, the proposition that this activity is educative refers to the fact that the activity in question is X which is conducive to Y. Therefore, the essential difference between descriptive and evaluative propositions consists in the fact that a descriptive proposition refers to certain cause-effect or means-consequences connections, whereas an evaluative proposition refers to certain means-ends connections. It is the ends involved that make a proposition evaluative in character. It may be argued that the ends to be achieved depend on each one's emotive disposition or personal decision. But

it should be observed that there are ends which have been accepted as desirable in a given society and to which most people in that society have been committed. Just like certain rules must be observed, if we wish to play chess well, similarly a definition of education is necessary, if the educational activities are to achieve desirable ends in a given society. Therefore, a definition of education may be construed as a rule by which the educational activities are directed to achieve a wide range of desirable ends. A definition of education must consist of the activities and the ends to which the activities are directed. One definition of education may be considered as better than another when it incorporates a wider and/or deeper range of desirable ends.

The accepted definition may be revised for a variety of reasons. First, we may abandon the accepted definition and propose a new one, if it fails to take account of certain desirable ends that have become significant in social life. Second, we may revise the accepted definition of education, if it is primarily concerned with realization of ends that have gradually become irrelevant to our social life. Third, as a definition of education is a prescriptive proposition that prescribes certain means-ends connections, it is obvious that if the means-ends connections prescribed by the definition does not exist, the definition must be revised along the line of the conclusions reached by science. Therefore, we may say that a definition of education is either conventional or revisionary. A conven-

tional definition of education is content to use the word education in a conventional way, and a revisionary definition of education is concerned to use the word education in a better way. It is in this sense that Rousseau's definition of education is revisionary in contrast with Plato's. It is in the same sense, too, that Dewey's definition of education is revisionary in contrast with Rousseau's. In general, the productions of revisionary definitions are interesting and may sometimes be challenging. But the possibility of revisionary definitions of education presupposes the existence of conventional ones.

CHAPTER X

DEWEY'S CONCEPT OF TEACHING AND LEARNING

In Dewey's view, teaching is not just the transmission of knowledge, as that may be handed down by books and learned men. The essential meaning of teaching is to create appropriate conditions of learning. Unless the conditions of learning are created, the teacher will merely waste his time and energy in trying to convey ready-made knowledge, i.e., information, to his pupils. Dewey suggests that the question of methods of teaching is

to find what conditions must be fulfilled in order that study and learning will naturally and necessarily take place, what conditions must be present so that pupils will make the responses which cannot help having learning as their consequence... The method of the teacher, on the other hand, becomes a matter of finding the conditions which call out self-educative activity, or learning, and of cooperating with the activities of the pupils so that they have learning as their consequence.¹

From Dewey's point of view, the conditions of learning, if created, will stimulate the pupil to achieve the results of learning, better than will the most ingenious method of teaching unaccompanied by these conditions.

Dewey's concept of teaching as creating the conditions of learning reminds us of the method used by Socrates. The basis of Socrates'

1. Dewey, John "Progressive education and the science of education," (in Dworkin, Martin, S. (ed.) Dewey on Education, Bureau of Publication, Teachers College, Columbia University, New York, pp. 113-126), p. 125

teaching is also to create the conditions under which genuine learning can take place. However, if one does hold the view that the essential meaning of teaching is to create the conditions of learning, one must be prepared to tell us what these conditions are. To this question, however, Socrates and Dewey would offer different answers. Socrates would most probably say that one basic condition the teacher must create is the pupil's awareness of his own ignorance, because the Socratic method is based upon the conviction that only when a man really becomes aware of his ignorance, will he seriously try to remedy the situation by gaining knowledge. In other words, one fundamental assumption underlying Socrates' concept of teaching is that awareness of one's ignorance is an important condition of learning. However, to the same question, Dewey seems to offer a somewhat different answer. According to Dewey, the conditions of learning to be created are the conditions by which the pupil's curiosity will be directed into intellectual channels of inquiry that would produce results in the way of increase of beliefs or knowledge. Dewey says that the teacher's province is to provide "the conditions by which organic curiosity will be directed into investigations that have an aim and that produce results in the way of increase of knowledge..."²

Dewey holds that every living creature wants a chance to be

2. How We Think, revised edition, p. 40

active and this tendency constitutes curiosity. There are three levels of curiosity, namely, the organic, social, and intellectual curiosity. The familiar fact that a physiological uneasiness leads a child to be reaching, poking, or pounding is an expression of his organic curiosity. When the child asks, for example, what holds up the house, his curiosity becomes social, because it develops under the influence of social stimuli. At the organic level of curiosity, one acts without particular purpose in mind, and at the social level, a variety of questions are asked, but no particular one is attended to for very long. Such activities are hardly intellectual, because they normally do not result in the acquiring of conceptual understanding. To the degree that a particular connection between things as cause or means and other things as effect, consequences, or ends are deliberately sought, does a curiosity becomes intellectual. Dewey says,

To the degree that a distant end controls a sequence of inquiries and observations and binds them together as means to an end, just to that degree does curiosity assume a definitely intellectual character.³

Curiosity becomes intellectual in the degree in which it is transformed into interest in finding out the connections between things as cause or means and other things as effect, consequences, or ends. For Dewey, teaching means the transformation of curiosity at the organic or social level into intellectual curiosity, and the task

3. Ibid., p. 39

of the teacher is to create the conditions so that such transformation can take place. Dewey says,

When the parent or teacher has provided the conditions ... and has taken a sympathetic attitude toward the activities of the learner by entering into a common or conjoint experience, all has been done which a second party can do to instigate learning. The rest lies with the one directly concerned.⁴

The crucial problem of teaching, then, is to create the conditions under which the organic and social curiosity can be directed into intellectual channels. Unless these conditions are created, the teacher as well as the pupils will waste their time and energy without achieving useful results. Only when these conditions are created, will the pupils' curiosity be directed into intellectual channels of inquiry that produce results in the way of increase of knowledge.

According to Dewey, the basic condition which the teacher must create is a genuine problematic situation to function as the initiating phase of thought. The pupil must have some genuine problem to solve and the solution must be of such a nature as to demand inquiries that produce results in the way of increase of knowledge. This means that the problematic situation should be of such a nature that its resolution demands the discovery of some connections between things as cause or means and other things as effect, consequences, or ends, which becomes the pupil's experience, belief, or knowledge.

4. Democracy and Education, p. 188

Dewey suggests,

When the feeling of a genuine perplexity lays hold of any mind (no matter how the feeling arises) that mind is alert and inquiring, because stimulated from within. The shock, the bite, of a question will force the mind to go wherever it is capable of going, better than will the most ingenious pedagogical devices unaccompanied by this mental ardor.⁵

This condition is the initiating phase of inquiry. In Dewey's view, the teacher cannot force the power to think upon his pupil who does not want to think. And the only way to direct the pupil to think is to let him find himself in a problematic situation, so that he will have some genuine problem to think about. Dewey says,

The crucial problem for the educator, whether parent or school teacher, is to utilize for intellectual purposes the organic curiosity of physical exploration and linguistic interrogation. This can be accomplished by attaching them to ends that are more remote, ... To the degree that a distant end controls a sequence of inquiries... just to that degree does curiosity assume a definitely intellectual character.⁶

Dewey is of the opinion that the difference between good thinking and bad thinking is that the former grows out of the conditions of human life, but the latter is not directly related to the actual conditions under which life is carried on. Dewey believes that if thinking is to produce results in the way of increase of knowledge, it must deal with genuine problematic situations. Thinking that does not grow out of or deal with a problematic situation is artificial;

5. How We Think, revised edition, p. 268

6. Ibid., p. 39

it is bad thinking. And, bad thinking, he says, is "scientifically 'dead'," and the inquiry based upon it is "hardly more than a form of intellectual busy work."⁷ Thus, the basic condition of learning must be a genuine problematic situation to function as the initiating phase of thought. However, the teacher must not merely stand off and look on, he must act as the intellectual leader of the whole group and always be ready to give proper aid when needed especially at the critical junctures. Dewey suggests that "the teacher is the intellectual leader"⁸ and "should enter especially at the critical junctures where the experience of pupils is too limited to supply just the material needed."⁹

We have been concerned with Dewey's concept of teaching. There are two questions to be considered in connection with his concept of learning: first, what are the elements of learning ? second, how does effective learning take place ? To the first question, Dewey's answer is that "learning is learning to think."¹⁰ Dewey asserts that "while we cannot learn or be taught to think, we do have to learn how to think well, especially how to acquire the general habit of reflecting."¹¹ In Dewey's view, there are three kinds of thought,

7. Logic: The Theory of Inquiry, p. 499

8. How We Think, revised edition, p. 273

9. Ibid., p. 270

10. Ibid., p. 78

11. Ibid., p. 35

and the best kind is called reflective thinking. Learning, for Dewey, is the development of reflective thinking.

According to Dewey, the first kind of thinking is automatic, because it refers to unregulated ideas or random recollections that happen to go through our heads. The second type of thinking is imaginative, because it refers to successions of imaginative incidents and episodes that go through the mind. In contrast, reflective thinking deals with a belief and the evidence that supports it, it also deals with how to utilize the established belief to reach some new belief. There are the three aspects of reflective thinking. Dewey says,

Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends constitutes reflective thought.¹²

Therefore, reflective thinking is a continuous process. Suppose, for example, we hold the belief that the world is spherical, we must consider very carefully the evidence that supports our belief and we must also try to utilize the belief to reach some new belief. Since learning, according to Dewey, is learning to think reflectively, and since reflective thinking has three aspects, it follows that there are three elements of learning: first, the attainment of the beliefs that have been established; second, careful consideration of the evidence that supports these beliefs; third, to utilize the

12. Ibid., p. 9

beliefs that have been established to reach new beliefs. In the first place, the statement that one has learned something means that he has attained some beliefs that have been established. For example, when a child acquires the belief that China is larger than Japan, he has learned something in geography. The belief is one that has been established. In the second place, learning also means the consideration, as carefully and widely as possible, of the evidence that supports established beliefs. When the child has acquired the belief that China is larger than Japan, he must proceed to consider what evidence supports this belief. It is hardly necessary to lay stress upon the importance of this element of learning. Many beliefs that were once established were false; men used to entertain, for instance, the belief that the world was flat which was false. If Columbus had accepted this belief without considering carefully the evidence that supported it, he would not have reached his new belief that the world was spherical.

In the third place, when we say that one has learned something, we very often mean that he has conducted an inquiry and reached a new belief that has never been established before. Columbus' belief that the world was spherical was a new one, because it had never been established prior to his discovery. Einstein's theory of relativity was new in contrast with Newton's theory of mechanics. Dewey suggests, "While the Greeks made knowledge more than learning, modern science makes conserved knowledge only a means to learning, to dis-

covery."¹³

Dewey's answer to the second question as to how effective learning takes place is that it takes place by doing and through problem-solving. There is little doubt that with respect to learning, Dewey places great emphasis upon doing and problem-solving. This is the reason why Dewey's method of learning is not infrequently referred to as "learning by doing" or "learning through problem-solving". However, in Dewey's view, learning by doing and learning through problem-solving are by no means identical with each other, because the former is the lower level of learning in comparison with the latter which may be better termed learning through inquiring. Learning by doing means that all the doings that result in growth have the function of learning. Dewey says,

To make the idea of activity effective, we must take it broadly enough to cover all the doings that involve growth of power — especially of power to realize the meaning of what is done.¹⁴

A child engages in his activities, and in the process of this engagement he learns. This is learning by doing, because the act of learning is a direct consequence of his activities. For example, when a child engages in making something with tools, he is not doing what he does for the sake of learning, but he learns in consequence of his direct activities. The same is true of children's learning how

13. Democracy and Education, p. 175

14. In Ratner, Joseph (ed.) Intelligence in the Modern World, p. 607

to walk, they do not set out intentionally to learn walking, they learn to walk by walking. Learning by doing means that the pupil must actually do something with materials. Dewey suggests,

An individual must actually try, in play or work, to do something with material in carrying out his own impulsive activity, and then note the interaction of his energy and that of the material employed. This is what happens when a child at first begins to build with blocks, and it is equally what happens when a scientific man in his laboratory begins to experiment with unfamiliar objects.¹⁵

It is not difficult to understand Dewey's theory of learning by doing. What it means is that the child must play on the playground, work with the materials and tools in the workshop and the laboratory; he must learn cooking, spinning, etc., so that his need of action, of desire to do something may result in learning. Dewey says, "We must conceive of work in wood and metal, of weaving, sewing, and cooking, as methods of living and learning, not as distinct studies."¹⁶

However, learning does not stop with doing, it rises above the level of doing in the degree in which it involves a problem to be solved. Learning through problem-solving means that the child learns when he solves a problematic situation by inquiry. Dewey holds that "learning is something that the pupil has to do himself and for himself,"¹⁷ and that if the pupil "cannot devise his own solution (not

15. Democracy and Education, p. 181

16. Dewey, John The Child and the Curriculum and The School and Society (Phoenix Books: The University of Chicago Press, 1956), in The School and Society, p. 14

17. How We Think, revised edition, p. 36

of course in isolation, but in correspondence with the teacher and other pupils) and find his own way out he will not learn, not even if he can recite some correct answer with one hundred per cent accuracy."¹⁸

A few words are needed to explain what Dewey means by problematic situation. A problematic situation is a situation of "active contact with things and persons."¹⁹ For example, when a man is lost in the woods, he is confronted with a problematic situation. Because the situation grows out of the actual conditions of life, Dewey's conception of problematic situation does not apply to the situation in which one is faced, for instance, with the problem as to whether two and two make four. It must be mentioned that Dewey remarks once that purely logical or mathematical problems constitute a problematic situation "only in case their manipulation to form a new whole occasions resistance, and thus reciprocal tension."²⁰ However, this is most probably the only place where Dewey suggests that when one were in theoretical doubt as to whether two and two make four, he would be faced with a problematic situation. On the whole, by problematic situations Dewey means such situations as that a traveler comes to a branching of the roads and lacks knowledge of deciding which road is right, or that a man is caught during a rain and tries to escape

18. Democracy and Education, p. 188

19. Ibid., p. 183

20. Dewey, John Studies in Logical Theory (Chicago: The University of Chicago Press, 1909), p. 39

quickly. If learning through problem-solving is to take place, the child must have opportunity to solve the problems that grow out of the conditions of his actual life.

It can be said that Dewey's conception of learning is generally consistent with his definition of education. Education, for Dewey, is the growth of knowledge and intelligence, which is in harmony with the three elements of learning. It will be recalled that according to Dewey, the three elements of learning include: first, the attainment of the beliefs that have been established; second, careful consideration of the evidence that supports these beliefs; third, the attainment of new beliefs that have never been established before. The question can be asked as to whether Dewey's methods of teaching and learning are really effective in achieving these three elements of learning.

It can be said that Dewey's methods of teaching are not economical ways of achieving the first two elements of learning. If learning is intended to attain the beliefs that have been established as well as to obtain the evidence in support of these beliefs, why is it necessary for the teacher to encounter problematic situations as a condition of learning ? Direct instruction is perhaps more effective in attaining the beliefs that have been established as well as in obtaining the evidence in support of these beliefs. Take, for instance, the attainment of the belief that the world is spherical. It can be said that when the child has been taught that the world is

spherical and the evidence produced in support of this belief, he has learned an established belief as well as the evidence in support of it. This means that the child has achieved the first two elements of learning. It is obviously a waste of time for the teacher to create a problematic situation or for the pupil to conduct an inquiry for the attainment of a belief and its evidence which are already well established. Do we really have to create a problematic situation in which a child will acquire the belief that the world is spherical ? Do we really have to ask the child to solve the problem whether the world is spherical ? The answers to these two questions should be in the negative so far as the attainment of established beliefs and the evidence in support of them are concerned.

In short, when the objective of learning is simply the acquiring of established beliefs and of the evidence in support of them, it is not necessary for the teacher to create problematic situations, nor is it necessary for the pupil to conduct an independent inquiry. Direct instruction can be more effective than Dewey's methods of teaching and learning. Therefore, it can be said that a more economical way of learning is to attain the established beliefs through reading and direct instruction and explanation, instead of through problem-solving. If we wish to learn Newton's theory of mechanics, for instance, what we need to do is to read the books by Newton and to get some assistance from our teacher where our experience is too limited to understand it. Scheffler pointed out,

But what reason do we have for assimilating all reflective thinking to the problem-solving model in general ? In ordinary speech, for example, the poet is thinking in the process of composition, the artist in creation, the translator in attempting a translation, and yet none is seeking the answer to a question.²¹

Scheffler's point is that one can learn even in the absence of a problematic situation. Suppose, for example, we pick up a book to read, it is beyond reasonable doubt that we will acquire some established beliefs and the evidence in support of them, but we are not faced with any problematic situation.

However, it must be observed that Dewey's methods of teaching and learning are designed primarily to achieve the third element of learning, namely, the attainment of the beliefs that have never been established before. It is true that the established beliefs and the evidence in support of them may be most effectively acquired through reading and direct instruction, but it is equally true that the acquiring of new beliefs that have never been established before, more often than not, demands an independent inquiry. For example, men used to hold the belief that the world was flat. Columbus certainly did not acquire this established belief through problem-solving, nor did he acquire it through an independent inquiry. Because the belief and the evidence in support of it could be obtained

21. Scheffler, Israel "Educational Liberalism and Dewey's Philosophy" Harvard Educational Review, XXVI, 1956, 190-198, p. 197

through reading or direct instruction. However, since Columbus had some doubt about the truth of the belief, it was necessary for him to conduct an independent inquiry in order to establish a new belief. The ability to conduct such an independent inquiry is called intelligence in Dewey's philosophy. Therefore, Dewey's methods of teaching and learning are designed primarily to achieve the third element of learning, namely, the attainment of new beliefs that have never been established before. Dewey's justification for his methods of teaching may be presented as follows: If a new belief is to be established, an independent inquiry needs to be conducted; if an independent inquiry is to be conducted, the pupil must have the ability to conduct it; if the pupil's ability to conduct an independent inquiry is to be developed, he must have opportunity to resolve a variety of problematic situations. Therefore, Dewey's justification for his methods of teaching involves a chain of argument which takes the form: If A is to be achieved, we must achieve B, and if B is to be achieved, we must achieve C, and if C is to be achieved, we must achieve D, where A stands for the attainment of new beliefs, B stands for conducting an independent inquiry, C stands for the ability to conduct an independent inquiry, D stands for the resolution of a variety of problematic situations. Since B is a means to A, and C is a means to B, and D is a means to C, it follows that D is a means to A. In short, Dewey's methods of teaching and learning are primarily the means of achieving the third element of learning, namely, the attain-

ment of new beliefs that have never been established.

There is little doubt that Dewey's methods of teaching and learning place tremendous emphasis upon discovery and initiative. The child must try to establish his own beliefs and discover the evidence in support of them, even though such beliefs and the evidence in support of them have been known to everybody else for a long period of time. Dewey says,

The child of three who discovers what can be done with blocks, or of six who finds out what he can make by putting five cents and five cents together, is really a discoverer, even though everybody else in the world knows it.²²

Every adult in the world knows what can be done with blocks or what he can make by putting five cents and five cents together. But such things are not familiar to the child. Certainly, we can teach him about these things through direct instruction. This can be done rather easily and we can expect him to understand them. Dewey at one point says that "no thought, no idea, can possibly be conveyed as an idea from one person to another."²³ He may not, however, be quite correct; the transmission of beliefs and knowledge as beliefs and knowledge may not be impossible. But the point, as Dewey notes, is that if the method of teaching puts too much emphasis upon the transmission of ready-made beliefs or knowledge through formal instruction, it may fail to develop the child's ability to conduct independent

22. Democracy and Education, p. 187

23. Ibid., p. 188

inquiry which is indispensable to the development of intelligence. Only by wrestling with the problematic situation at first hand, seeking and finding his own solution, does the child develop his ability to conduct an independent inquiry. For example, had Columbus failed to conduct an independent inquiry, he would not have been able to establish his new belief that the world is spherical. By the same token, had Einstein failed to conduct his independent inquiry, it would not have been possible for him to construct his theory of relativity. Completely central to Dewey's concept of teaching and learning is the development of intelligence which means the ability to conduct an independent inquiry in search of new beliefs or knowledge. What Dewey is really concerned with is learning in the sense of discovery. Dewey has time and again pointed out that knowledge is merely "the working capital, the indispensable resources, of further inquiry; of finding out, or learning, more things."²⁴ He has on many occasions insisted upon the fact that the development of intelligence, which is tantamount to the development of scientific attitudes and the ability to employ scientific methods, is "the chief business of study and learning."²⁵ One criticism leveled at Dewey's methods of teaching and learning is their inordinate concern with the development of intelligence at the expense of the acquiring of

24. Ibid., p. 186

25. Philosophy and Civilization, p. 326

established beliefs. Learning in the sense of acquiring established beliefs can very effectively take place through reading and formal instruction. But Dewey seems to under-estimate the importance and necessity of "expository" teaching as a method of importing a body of established knowledge and belief.

CHAPTER XI

DEWEY'S EDUCATIONAL THEORY

Dewey holds that education is a social process designed to realize a particular social ideal. The particular social ideal which Dewey's education is designed to realize is a truly democratic community in which the interests of a social group are shared by all its members and in which each group freely interacts with other groups. This means that, for Dewey, the end of education is to build a truly democratic community. As we have already seen, from Dewey's point of view, if a truly democratic community is to come into existence, man must have a store of scientific knowledge about social phenomena which does not yet exist. As Dewey says "The prime condition of a democratically organized public is a kind of knowledge and insight which does not yet exist."¹ But development of science and scientific knowledge is also related to the growth of democracy, i.e., freedom of inquiry, open discussion and evaluation of knowledge, etc. Therefore, according to Dewey, growth of science and democracy are the two fundamental conditions for the emergence of a truly democratic community. Since the end of education is to build a truly democratic community, and since science and democracy are the two fundamental conditions to be fulfilled, education must help to bring about the conditions of science and democracy. What this means is that if A

1. The Public and Its Problems, p. 166

and B are two fundamental conditions of realizing C, and if D is designed to realize C, then D must be conducive to both A and B. In short, science and democracy are the two leading conceptions of Dewey's educational theory.

Before we proceed to explore Dewey's educational theory in some detail, we may recall our earlier discussion (Ch. IX) of the meaning of Dewey's contention that education has no end. If education has no end, it seems incorrect for us to interpret Dewey as holding the view that the end of education is to build a truly democratic community. And if it is incorrect for us to interpret him as holding the view that the end of education is to build a truly democratic community, it will follow that we can not argue that since A and B are the two fundamental conditions to be fulfilled if C is to be realized, and since D is designed to realize C, therefore, D must be related to the endeavour of fulfilling the conditions of A and B. The reason is, as we can see quite easily, that if "D is designed to realize C" or "Education is designed to build a truly democratic society" be false, we have no clear reason for asserting that D must concern itself with bringing about the conditions of A and B or that education must fulfill the conditions of science and democracy. Hence it is extremely important for us to determine whether it is really the case that according to Dewey the end of education is to build a truly democratic society.

Dewey has suggested that education has no ends in two different

senses. In the first place, he tells us that education as an abstract idea has no ends. Dewey says,

And it is well to remind ourselves that education as such has no aims. Only persons, parents, and teachers, etc., have aims, not an abstract idea like education.²

As we know, in Dewey's logical theory, there are two kinds of terms, namely, universal and existential. A universal term designates a definition, whereas an existential term denotes something that exists in time and space. Education as an abstract idea is a universal term, and as a universal term, it designates a definition of education. Dewey says, "Any intelligible word designates something;... The important logical matter is the difference in what is designated."³ Since education as an abstract idea is a universal term that designates a definition of education, it makes no sense to ask what the end of education is when education is taken as an abstract idea.

In the second place, Dewey also suggests that education as a process of living a fruitful and significant life has no end beyond itself, it is its own end. Dewey advocates that education is identical with the process of "living a life which is fruitful and inherently significant"⁴ and that "there is nothing to which education is subordinate save more education."⁵ This means that "the educational

2. Democracy and Education, p. 125

3. Logic: The Theory of Inquiry, p. 360

4. Democracy and Education, p. 281

5. Ibid., p. 60

process has no end beyond itself; it is its own end;"⁶ If education is taken as a process of living a fruitful and significant life, to say that education has an end beyond itself would mean that there is some end of life beyond the process of living a fruitful and significant life. If one were asked as to what this end of life is, one would be confronted with a very difficult question. And unless he is prepared to appeal to some sort of circular reasoning or theological explanation, he would not be able to answer it at all. It is thus not difficult to see why Dewey advocates that education as a process of living a fruitful and significant life has no end beyond itself.

However, the question to be raised is: Does Dewey really wish to tell us that the education that is given in the school has no end ? Does he seriously wish to suggest that education in the sense of schooling has no end beyond itself, it is its own end ? The answers to these questions are in the negative. As a matter of fact, in Dewey's view, the end of education in the sense of schooling is to build a new society. This is why Dewey advocates that "the schools should participate in the production of a future society"⁷ and that we need a democratic system of education for "the creation of a democratic society".⁸ Therefore, it can be maintained that according

6. Ibid., p. 59

7. In Ratner, Joseph (ed.) Intelligence in The Modern World, p. 692

8. Dewey, John "Introduction" to The Use of Resources in Education, by E. R. Clapp, in Dworkin, Martin S. (ed) Dewey on Education, 127-134, p. 133

to Dewey, education in the sense of schooling is a means of creating a new society. Did not he suggest that the school is "the primary and most effective interest of social progress and reform" ?⁹ If, then, the end of education in the sense of schooling is to build a truly democratic community, and if the production of such a truly democratic community demands the cultivation of both science and democracy, it would follow that for the creation of a truly democratic community we need a system of education where the educational process is led by the principles exemplified in science and democracy. This accounts for the fact that the fundamental principles exemplified in science and democracy are the leading conceptions of Dewey's educational theory.

According to Dewey, if the school is to become an effective means of building a truly democratic community, the individuals must be educated in such a way that they are capable of making significant contributions to the development of such a community. Dewey says that the task of the schools today is that of "preparing the youth of the country for active, intelligent participation in the building and the rebuilding and the eternal rebuilding... of a genuinely democratic society."¹⁰ However, Dewey points out that no individual can be expected to be able to make any significant contribution to the

9. Dewey, John "My pedagogic creed" in Garforth, F. W. (ed.) John Dewey Selected Educational Writings (Heinemann, London, 1966, 44-59), p. 58

10. Problems of Men, p. 44

development of a truly democratic community, unless he possesses certain appropriate dispositions. What are these dispositions ? To this question, Dewey answers that the intellectual disposition which each individual must possess is the ability to employ the scientific method of inquiry; other mental and moral dispositions include scientific attitude as well as democratic habits of mind. Therefore, the school must become a special environment in which such intellectual and moral dispositions may be cultivated. What is the nature of this special environment ? Dewey's answer to this question is twofold: In the first place, for the cultivation of the child's scientific attitude and his ability to employ the scientific method of inquiry, it is necessary that "our schools truly become laboratories of knowledge-making"¹¹ in which the child will have opportunity to conduct scientific inquiries. In the second place, for the cultivation of the child's democratic habits of mind, the school must truly become "a miniature community, an embryonic society."¹² Dewey observes that intellectual and moral dispositions can not be passed from one person to another, they can only be cultivated by means of the environment. He asserts that schools are "the typical instance of environments framed with express reference to influencing the mental and moral disposition of their members."¹³

11. Characters and Events, Vol. II, p. 775

12. The School and Society, p. 18

13. Democracy and Education, p. 32

In Dewey's view, the school is a place where the child learns the scientific way of treating the familiar material of ordinary experience, so that he may develop the scientific attitude and get some insight into what scientific method means. Dewey remarks,

There is very little place in the traditional schoolroom for the child to work. The workshop, the laboratory, the materials, the tools with which the child may construct, create, and actively inquire, and even the requisite space, have been for the most part lacking. The things that have to do with these processes have not even a definitely recognized place in education.¹⁴

From Dewey's point of view, the life of a child in school must be brought into contact with his daily activities out of school. Because if the child's life in school is brought into contact with his daily activities in the home, on the playground, and in the neighborhood, there will be plenty of opportunity for him to cultivate scientific attitude and to develop the ability to employ the scientific method of inquiry. Take the example of the little child who wants to cook eggs. Since he has to work things out, he will have plenty of opportunity to think, to observe, to do things, and to experiment. In Dewey's view, this is the best way of developing the scientific attitude of mind and the ability to employ the scientific method of inquiry. In short, the child's scientific attitude and his ability to employ the scientific method of inquiry can be developed only when the schools become laboratories of knowledge-making, not places where

14. The School and Society, p. 32

the mere transmission of ready-made knowledge takes place. This is why Dewey suggests that the school must become

a place for getting and testing experience, as real and adequate to the child upon his existing level as all the resources of laboratory and library afford to the scientific man upon his level.¹⁵

According to Dewey, what is primarily required for the cultivation of scientific attitude and the development of the ability to employ the scientific method of inquiry is first-hand experience; an active engagement in the solution of a problem by the method of observation and experimentation.

We have been concerned with the conditions of the school by which scientific attitude and the ability to employ the scientific method of inquiry may be developed. We must come to the next problem as to how democratic habits of mind are formed. What are "democratic habits of mind" ? By democratic habits of mind Dewey means the habits of cooperation, participation, and sharing, in a common life as well as in the pursuits of knowledge. Dewey believes that habits operate all the time of our waking life, because "we are the habits."¹⁶ He says, "Character is the interpenetration of habits."¹⁷ In Dewey's view, one of the essential factors at work in contemporary life is

15. Dewey, John "Democracy in Education" in Garforth, F. W. (ed.) John Dewey Selected Educational Writings (Heinemann, London, 1966, 181-196), p. 193

16. Dewey, John Human Nature and Conduct (New York: Modern Library, 1950), p. 24

17. Ibid., p. 38

democratic habits of mind. Unless these democratic habits of mind are part of the fiber of a people, the existence of a truly democratic community is insecure. Therefore, the function of the school is, according to Dewey, to serve as a special social environment in forming the democratic habits of mind. Dewey proceeds to point out that for the development of the democratic habits of mind, the environment of the school must become "a form of community life."¹⁸ What does Dewey mean by a form of community life ? According to Dewey, persons do not form a community by living in physical proximity. A form of community life is more than a group of people living together, it is primarily a mode of associated living in which the individuals involved are interested in the common end and regulate their specific activity to achieve it with a maximum of participation, cooperation and communication. Dewey says,

Since a democratic society repudiates the principle of external authority, it must find a substitute in voluntary disposition and interest; these can be created only by education.¹⁹

By voluntary disposition and interest Dewey is apparently referring to the democratic habits of mind. If the education given in the school is to assume the responsibility of building a truly democratic community, the school itself must truly become a form of community life in which the pupils have opportunity to share in a common life and to

18. "My Pedagogic Creed" in Garforth, op. cit., p. 49

19. Democracy and Education, p. 101

achieve a common end with a maximum of participation, cooperation and communication. This is why Dewey insists upon the fact that the school is simply that form of community life which is most effective in bringing the child "to enter into proper relations with others in a unity of work and thought."²⁰

These were the views presented by Dewey several decades ago. How should we evaluate them today? It is fair to say that education may be construed either as the transmission of knowledge or as the cultivation of intellectual and moral dispositions or both. If we regard education simply as the transmission of knowledge, we will be justified in thinking that the school as Dewey devises it is a rather an inefficient educational institution, because it is not very effective for the transmission of ready-made knowledge. An illustration or two will make this assertion clear. Suppose the subject is geography. The teacher certainly can illustrate to the students such elements as continent, island, coast, peninsula, ocean, lake, etc., by formal instruction without actually arranging any form of community life. The same type of method may be applied to other subjects taught in the schools. History, for example, may be taught in such a way that the students get acquainted with the development of historical events through reading and formal instruction. It is certainly not true that a student can only acquire knowledge of history by

20. "My Pedagogic Creed" p. 50

living a community life. For this reason, if we regard education exclusively as the transmission of knowledge, we will be justified in thinking that, to use Scheffler's words, "the school ought to stand apart from life in a basic sense",²¹ because the acquiring of established knowledge can take place without actively participating in a form of community life.

If, however, we regard education as the cultivation of intellectual and moral dispositions, we may agree with Dewey that the schools must truly become laboratories of knowledge-making as well as a form of community life. Because it can be said that one's intellectual and moral dispositions can be more effectively cultivated through first-hand experience. For the development of the ability to employ the scientific method of inquiry, for instance, we need to have opportunity to conduct experiments in the laboratory. For the cultivation of the habit of sharing, we need to have opportunity to share in some task with others. Dewey certainly has a point when he says, "Only by sharing in some responsible task does there come a fitness to share in it."²² Dewey cites an interesting story: there was a swimming school where youth were taught to swim by formal instruction without actually going into the water. "When one of the young men so

21. Scheffler, Israel "Educational Liberalism and Dewey's Philosophy" Harvard Educational Review, XXVI, 1956, 190-198, p. 196

22. "Democracy in Education" in Carforth, op. cit., p. 188

trained was asked what he did when he got into the water, he laconically replied, 'Sunk.'" ²³ This story indirectly proves that appropriate dispositions can be cultivated only when the schools truly become laboratories of knowledge-making and a form of community life. However, the same story does not prove that formal instruction is totally ineffective in conveying knowledge. We are familiar with the Socratic-Platonic teaching that no man does evil knowingly but only because of ignorance of the good. However, the fact is that nothing is more common than for a man to know, for instance, that it is good to be cooperative and yet unable or unwilling to cooperate with others. Dewey tries to defend the Socratic-Platonic teaching by arguing,

Knowledge of the good was not a thing to be got either from books or from others, but was achieved through a prolonged education.²⁴

The question is: Is it the case that knowledge of the good cannot be got either from books or from others ? When a child is told, for example, that he ought to be cooperative, doesn't he gain some moral knowledge ? The answer is definitely in the affirmative. However, the fact that the child has moral knowledge does not necessarily guarantee that he will act accordingly. And it would be incorrect to argue, as Dewey does, that the child has, in fact, not gained the

23. Dewey, John Moral Principles in Education (New York: Philosophical Library, 1959), p. 14

24. Democracy and Education, p. 412

knowledge that he ought to be cooperative. The only thing we can say is that he has not cultivated the habit of cooperation. For the cultivation of the habit of cooperation, the child must have opportunity to engage in cooperative activities.

In short, it can be said that Dewey shows his insight in advocating that for the cultivation of intellectual and moral dispositions, the schools must truly become laboratories of knowledge-making and a form of community life. It must also be admitted, however, that Dewey has rather unnecessarily played down the role of formal instruction in acquiring knowledge that has been established in the past.

CHAPTER XII

CONCLUDING REMARKS

Dewey conceives of philosophy as a means of better survival, and as always functional or instrumental. Philosophy arises, he tells us, as an intellectual reaction to the environment when some need is felt for the resolution of conflicts in the environment. Philosophy works towards the formulation of certain general ideas, what Dewey calls "ultimate principles", which unify the conflicting factors into a harmonious whole. The conflict between the traditional attitude and beliefs and the scientific departures in many spheres of experience created in Dewey's mind the need and the resolve for a synthesis of the old and the new, of the pre-scientific and the scientific ideas and attitudes. Dewey developed his philosophy in response to this need.

His philosophy, as we have seen, is an attempt to undercut the dualism of the scientific and pre-scientific, and all resulting dualism by accepting the scientific method of investigation in every sphere of human experience. He maintains that the empirical method of science is not exclusively a procedure of natural sciences; it is not always and necessarily a "laboratory method". According to him, the method of science can very well be used as a method of investigation in dealing with problems of valuation and with other social phenomena.

Also involved in Dewey's conception of philosophy is the notion that a philosophy is a plan of action, that is, it is a means of finding out a way to gain control over the conflicting situations. Philosophical systems are, according to Dewey, policies or proposals in given cultural contexts. Though it is not always easy to discover that a particular philosophy is a plan, Dewey argues at some length to show that the philosopher, often unbeknown to himself, is discussing the basic beliefs of his time, finding answers to the problems of his contemporary culture.¹ He also argues that a convincing way of discovering the "life situations" involved in philosophy is to look at the philosophical problems and proposals "from the side" of education. Education, he writes,

offers a vantage ground from which to penetrate to the human, as distinct from the technical, significance of philosophic discussions... When philosophic issues are approached from the side of the kind of mental disposition to which they correspond, or the differences in educational practice they make when acted upon, the life-situations which they formulate can never be far from view.²

Since education is the medium for the projection and cultivation of the accepted values in a society, the proposals of an accepted philosophy find application in the theory and practice of education. Now, it can be understood that Dewey's concern with the problems of social and educational theory is firmly rooted in his conception of

1. See Democracy and Education, Chapter XXIV

2. Ibid., p. 383

the normative function of philosophy. As Frankena writes,

Dewey is... actually a speculative philosopher of a sort, since he has a general conception of life and the world, but he usually stresses the normative function of philosophy as the most general theory for the guidance of human action and education (he sometimes defines philosophy as "the general theory of education").³

In considering Dewey's philosophy it is therefore necessary to bear in mind that Dewey wants philosophy to play a role in our contemporary culture which he believes to be its historical role, that is, to function as an instrument of cultural reconstruction. This view of philosophy is, however, not currently very popular with professional philosophers. But it has undoubtedly a kind of responsiveness to human problems and a sense of responsibility which no one probably can or wishes to dispute.

It is probably this strong practical concern which often led Dewey to consider philosophy as almost identical with social theory. As philosophical systems are usually judged by their emphases and general tendencies, we can more or less see the reason why Dewey is often accused of confusing the philosopher's task with that of social reformer.⁴ We therefore thought it necessary to inquire how in Dewey's philosophical system the principles of a social theory

3. Frankena, William K. Philosophy of Education, (New York: The Macmillan Company, 1965), p. 11

4. See Blanshard, B. "Can the philosopher influence Social Change ?", Journal of Philosophy, Vol. LI, No. 24, 741-753

could be distinguished from the philosophical doctrines. We tried to work out a distinction between philosophy of education and what may be appropriately called educational theory.

Dewey's philosophy also raises certain questions about the nature of scientific method and its application into knowing and learning. It has been argued that scientific methods are primarily methods of verification, not of discovery. "If there were such, all we need would be discovered, and we would not have to wait for rare men of genius."⁵ Then, again, it has been said that one central interest of science is the explanation of natural phenomena. However, Dewey seems to depart from both these notions in his conception of science. As a result, he comes to accept knowledge in a rather narrow sense. If we accept Dewey's conception of knowledge as referring only to the empirical or empirico-logical connections of things, we would have difficulty in calling a mathematical proposition such as two and two make four or the proposition that education is the development of creative thinking a case of knowledge in the strict Deweyan sense.

This narrowness is also reflected in his conception of learning. Dewey formulates the pattern of inquiry as the prototype of all competent reflective thinking or scientific knowing. Since for him knowing and learning are identical, he translates the theory of

5. Cohen, Morris R. Studies in Philosophy and Science (New York: Henry Holt & Co., 1949), p. 149

knowing into a method of learning. He therefore argues that the pupils must face and meet concrete problematic situations in the classroom and learn by discovering the solution themselves. However, there can be doubts as to what this business of problem-solving exactly means as a method of learning. Dewey seems to push the analogy between his notion of scientific knowing and learning a little too far. The child or the immature learner is not a little scientist. The scientist comes to experimentation after a long apprenticeship; his problems are to a great extent presented and determined by the discipline he serves. A child cannot be expected to see problems easily or to seek their solutions quite independently. Though we do not deny that the child's own needs and interests are to be cared for, Dewey seems at places to stress too far the importance of these needs and interests. Then, again, this rigid pattern does not permit Dewey to recognize that different methods can be effective in learning. Mechanical drill, for example, is quite effective in learning such things as the multiplication table. Dewey's method also minimizes expository instruction. It unnecessarily wants the learner to question many simple things which he can very well take as settled. As we have pointed out, this trial-and-error procedure of learning can be wasteful of the pupil's time and energy, especially when in problematically approaching known truths he is allowed to repeat errors which with a little instruction he could have been able to avoid.

There are also some ambiguities about Dewey's recommendation that the school should be made a genuine form of active community life where the children will learn the democratic way of living. Dewey has also pointed out that the school will be a "simplified" and "selected" social environment which will nevertheless be continuous with the rest of society outside the school. While this can be accepted in principle, problems will certainly arise when we try to determine the norms or the criteria for simplification and selection. This difficulty has been obvious to many followers of Dewey who could not agree among themselves as to the measures necessary for carrying out this recommendation.⁶

While we are in general agreement with the basic principles of Dewey's conception of democracy, it must be admitted that philosophical justification of a certain "way of life" is a very difficult and complicated business. Dewey has argued repeatedly against the logical positivists' suggestion that the basis for our value systems is bound to be a "practical decision". However, it cannot be said that Dewey succeeded in demonstrating empirically that democracy could possibly be the best form of social life.⁷ But if we remember

6. See Bhattacharyya, N. C. "The role of the teacher in John Dewey's educational theory" Alberta Journal of Educational Research, Vol. XIII, No. 1, 1967, pp. 33-42

7. See Bhattacharyya, N. C. "John Dewey's Instrumentalism, Democratic Ideal and Education" Educational Theory, Vol. 18, No. 1, Winter, 1968 issue, 60-72

Dewey's attempt to distinguish between intrinsic and instrumental values, it can possibly be said that the value of democracy in the instrumental sense can be made subject to public testing. Dewey is, as we are aware, not interested in formulating anything as a fixed or final value. Naturally, we should interpret Dewey's concern with democracy as an attempt to establish certain guidelines for reconstructing the existing state of social life. He believed that such a reconstruction cannot be achieved in isolation. As he said, "The reconstruction of philosophy, of education, and of social ideals and methods... go hand in hand."⁸ There is, we think, considerable merit in Dewey's contention that a democratic way of life is much more compatible with a philosophy of experimentalism than with Platonic Idealism or other forms of Absolutism. There is also much to be said for Dewey's concern for shared experience and shared goods within a community, and free communication and interaction among the various groups within a democratic society. One can visualize that if a great community, as John Dewey envisaged it, ever comes to existence it will possibly embody many of the principles contained in Dewey's conception of democracy.

Finally we should also mention that Dewey, like Plato, recognized the important role education must play in a conception of ideal society. As he said that "The conception of education as a social

8. Democracy and Education, p. 386

process and function has no definite meaning until we define the kind of society we have in mind",⁹ he followed this up by offering general recommendations as to the educational measures required for the creation of the kind of democratic society which he had in mind. Much of what Dewey had said on educational matters is no doubt interesting and important, and deserves attention in its own right. John Dewey had been for decades an "international school teacher"; the "Dewey movement" in education exerted tremendous influence for more than forty years in the United States and for shorter periods in many other lands. In this essay it has not been our purpose to discuss every important aspect of his philosophical and educational theory. It is not claimed that our foregoing account of Dewey is enough for a clear and complete grasp of his philosophy and educational theory. It is scarcely necessary to say that there remain many unexamined terms, concepts, arguments, and areas, in Dewey's social and educational theory which cry out for detailed logical clarification. We will, however, consider to have achieved something of our present purpose if we have succeeded in clarifying some general concepts and ideas which are important in Dewey's thinking about the ideals of society and aims of education.

9. Ibid., p. 112

BIBLIOGRAPHY

Works by John Dewey

I. Books:

1. Characters and Events (New York: Henry Holt and Company, 1929, 2 vols)
2. The Child and the Curriculum and The School and Society (Phoenix Books: The University of Chicago Press, 1956)
3. Democracy and Education (New York: The Macmillan Company, 1916)
4. Essays in Experimental Logic (New York: Dover Publications, INC., 1916)
5. Ethics revised edition (New York: Henry Holt and Company, 1932) Written with James H. Tufts
6. Experience and Education (New York: The Macmillan Company, 1947)
7. Experience and Nature (New York: Dover Publications, INC., 1958)
8. Freedom and Culture (New York: Capricorn Books, 1939)
9. How We Think (Boston: D. C. Heath and Co., 1910)
10. How We Think (Boston: D. C. Heath and Co., revised edition, 1933)
11. Human Nature and Conduct (New York: Modern Library, 1950)
12. Individualism, Old and New (New York: Minton, Balch and Company, 1930)
13. The Influence of Darwin on Philosophy and Other Essays in Contemporary Thought (New York: Henry and Co., 1910)
14. Intelligence in the Modern World: John Dewey's Philosophy. Edited, and with an Introduction, by Joseph Ratner (New York: The Modern Library, 1939)

15. John Dewey on Experience, Nature and Freedom. Edited, with an Introduction, by Richard J. Bernstein. (New York: Liberal Arts Press, 1960)
16. Knowing and the Known (Boston: The Beacon Press, 1949)
Written with Arthur F. Bentley
17. Liberalism and Social Action (New York: Capricorn Books, 1963)
18. Logic: The Theory of Inquiry (New York: Henry Holt and Company, 1938)
19. Moral Principles in Education (New York: Philosophical Library, 1959)
20. Philosophy and Civilization (New York: Capricorn Books, 1963)
21. Problems of Men (New York: Philosophical Library, 1946)
22. The Public and Its Problems (Denver: Alan Swallow, 1927)
23. The Quest for Certainty (New York: G. P. Putnam's Sons, 1960)
24. Reconstruction in Philosophy (Boston: The Beacon Press, 1963)
25. The Sources of a Science of Education (New York: Horace Liveright, 1929)
26. Studies in Logical Theory (Chicago: The University of Chicago Press, 1909)
27. Theory of Valuation (Chicago: University of Chicago Press, 1939)

II. Articles:

1. "Democracy in Education" in F. W. Garforth (ed.) John Dewey Selected Educational Writings (Heinemann, London, 1966, 181-196)
2. "Ethical subject-matter and language" Journal of Philosophy, XLII, 1945, 701-712

3. "Experience, knowledge, and value" in Paul Arthur Schillpp (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939, 515-608)
4. "The field of 'value'" in Ray Lepley (ed.) Value: A Cooperative Inquiry (New York: Columbia University Press, 1949, 64-77)
5. "Induction and deduction" in A Cyclopedia of Education, (New York: The Macmillan Company, Vol. III, 422-424)
6. "Introduction" to The Use of Resources in Education, by E. R. Clapp, in Martin S. Dworkin (ed.) Dewey on Education (Bureau of Publication, Teachers College, Columbia University, New York, 127-134)
7. "Is logic a dualistic science ?" The Open Court, 16 Jan. 1890, III, 2040-2043
8. "The meaning of value" Journal of Philosophy, XXII, 1925, 126-133
9. "My pedagogic creed" in F. W. Garforth (ed.) John Dewey Selected Educational Writings (Heinemann, London, 1966, 44-59)
10. "Philosophy" in Encyclopaedia of the Social Sciences (New York: The Macmillan Company, 1934, XII, 118-128)
11. "Philosophy of education" in A Cyclopedia of Education (New York: The Macmillan Company, 1918, 697-703)
12. "Progressive education and the science of education" in Martin S. Dworkin (ed.) Dewey on Education (Bureau of Publications, Teachers College, Columbia University, New York, 113-126)
13. "Science and the future of society" in J. Ratner (ed.) Intelligence in the Modern World (New York: The Modern Library, 1939, 343-363)
14. "Scientific method" in A Cyclopedia of Education (New York: The Macmillan Company, Vol. V, 292)
15. "Truth" in A Cyclopedia of Education (New York: The Macmillan Company, 1913, Vol. V, 632-633)

16. "Unity of science as a social problem" in International Encyclopedia of Unified Science, Vol. I, No. 1, 29-38)
17. "Values, liking, and thought" Journal of Philosophy, XX, 1923, 617-622

Writings on John Dewey

1. Bhattacharyya, N. C. "The role of the teacher in John Dewey's educational theory" Alberta Journal of Educational Research, Vol. XIII, No. 1, 1967, 33-42
2. ———. "John Dewey's instrumentalism, democratic ideal and education" Educational Theory, Vol. 18, No. 1, Winter, 1968 issue, 60-72
3. Blanshard, B. "Can the philosopher influence social change ?" Journal of Philosophy, Vol. LI, No. 24, 741-753
4. Ellis, Frederick Eugene "Dewey's concept of education for Growth" Educational Theory, Vol. V, 1955, 12-15
5. Frankena, William K. Philosophy of Education (New York: The Macmillan Company, 1965)
6. Geiger, George Raymond "Dewey's Social and Political Philosophy" in Paul Arthur Schilpp (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939, 337-368)
7. Hook, Sidney "John Dewey — philosopher of growth" Journal of Philosophy, Vol. LVI, 1959, 1010-1018
8. ———. "The ethical theory of John Dewey" in his The Quest for Being (New York: St. Martin's Press, 1961, 49-70)
9. Horne, Herman Harrell The Democratic Philosophy of Education: Companion to Dewey's Democracy and Education, Exposition and Comment (New York: The Macmillan Company, 1932)
10. Lepley, Ray (ed.) Value: A Cooperative Inquiry (New York: Columbia University Press, 1949)
11. Murphy, Arthur E. "John Dewey and American Liberalism" Journal of Philosophy, Vol. 57, 1960, 420-436

12. Nagel, Ernest "Dewey's theory of natural science" in his Sovereign Reason (Illinois: The Free Press, 1954, 101-117)
13. Pratt, James Bisset What is Pragmatism ? (New York: The Macmillan Company, 1909)
14. Russell, Bertrand "Dewey's New Logic" in Paul Arthur Schilpp (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939, 135-156)
15. Scheffler, Israel "Educational Liberalism and Dewey's Philosophy" Harvard Educational Review, XXVI, 1956, 190-198
16. Schilpp, Paul Arthur (ed.) The Philosophy of John Dewey (Evanston and Chicago: Northwestern University, 1939)
17. White, Morton G. "Value and obligation in Dewey and Lewis" The Philosophical Review, V. LVIII, 1949, 321-329
18. ———. "Is ethics an empirical science ?" in his Social Thought in America (New York: The Viking Press, 1949, 203-219)

Other References

1. Best, Edward "Common confusions in educational theory" in R. D. Archambault (ed.) Philosophical Analysis and Education (Routledge, 1965, 39-56)
2. Broudy, Harry S. "How philosophical can philosophy of education be ?" Journal of Philosophy, Vol. LII, 1955, 612-622
3. Cohen, Morris R. Studies in Philosophy and Science (New York: Henry Holt and Co., 1949)
4. Einstein, Albert "Geometry and experience" in his Ideas and Opinions (New York: Crown Publishers, INC., 1962, 232-246)
5. Hardie, C. D. "Education and the revolution in philosophy" The Forum of Education, Vol. XXII, 1963, 66-67

6. ———. "Has the philosophy of education any content ?"
The Forum of Education, Vol. XXIV, 58-60
7. Hare, R. M. The Language of Morals (Oxford, 1952)
8. Mackie, Margaret "The philosophy of education" The Forum of Education, Vol. XXIII, 1964, 126-129
9. Moore, G. E. "The conception of intrinsic value" in his Philosophical Studies (New Jersey: Littlefield, Adams and Co., 1965, 253-275)
10. ———. "William James' 'Pragmatism'" in his Philosophical Studies (Totowa, New Jersey: Littlefield, Adams and Co., 1965, 97-146)
11. Peters, R. S. "Education as Initiation" in Archambault, Reginald D. (ed.) Philosophical Analysis and Education (London: Routledge and Kegan Paul, 1965, 87-111)
12. Price, Kingsley "Is a philosophy of education necessary ?"
Journal of Philosophy, Vol. LII, 1955, 622-633
13. Reid, L. Arnaud "Philosophy and the theory and practice of education" in R. D. Archambault (ed.) Philosophical Analysis and Education (Routledge, 1965, 17-37)
14. Russell, Bertrand An Inquiry into the Meaning and Truth (New York: W. W. Norton and Company, INC., 1940)
15. Scheffler, I. (ed.) Philosophy and Education, 2nd ed., (Allyn and Bacon, 1966)
16. Stevenson, C. L. Ethics and Language (London: Oxford University Press, 1944)

B29904